iVMS-2000

Hybrid PC-DVR

User Manual

V2.0.1

2009-9

Thank you for purchasing our product. If there is any question or request, please feel free to contact us.

This Manual is for iVMS-2000 Hybrid PC-DVR Software.

Please kindly notice that NOT all of the iVMS-2000 software version supports IP camera connection.

This manual may contain several technically incorrect places or printing errors, and the content is subject to change without notice. The updates will be added into the new version of this manual, and we will readily improve or update the product or procedure described in the manual.

Index

1 Brief Introduction 1
1.1 iVMS-2000 System Solution 1
1.2 iVMS-2000 Main Features 2
2 Install and Uninstall 4
2.1 Installation 4
2.2 Uninstall 11
2.3 Start iVMS-2000 13
3 Main Console 16
3.1 Menu 17
3.1.1 System Menu 17
3.1.2 View Menu 19
3.1.3 Tool Menu 19
3.1.4 Help Menu 24
3.2 Live preview 25
3.2.1 Live Preview specified camera 25
3.2.2 Live Preview multiple cameras 26
3.3 Live Preview in Group 26
3.3.1 Live Preview Specified Group 26
3.3.2 Cycle Live Preview of Group 26
3.4 Operation on Live Preview Windows 26
3.4.1 Quick PTZ Control (Screen PTZ Control) 27
3.4.2 Instant Playback 27
3.4.3 Digital Zoom 27
3.4.4 Snapshot 28
3.4.5 Manual Record 28
3.4.6 Stop Live Preview 28
3.4.7 Right-Click Menu of Live Preview 28
3.5 Main Buttons 29
3.5.1 Live Preview Layout 29
3.5.2 Full Screen Mode 29
3.5.3 Stop All Cameras' Live Preview 29
3.5.4 Start Emergency Record 30
3.5.5 Enable/Disable Manual Record on All Cameras 30
3.5.6 Start Auto Switch 30
3.5.7 Enable/Disable Live Audio 30
3.6 PTZ Control 30
3.6.1 Preset 32
3.6.2 Patrol 33
3.6.3 Pattern 36

3.7 Video Parameters Configuration 38
3.8 Alarm out manual control 39
3.9 Alarm information bar 41
3.10 Aux Preview 41
4 Playback 43
4.1 Search by time 45
4.2 Synchronous Playback 47
4.2.1 Playback Clips 48
4.2.2 Playback Window Control Bar 49
4.2.3 Playback Time Bar 51
4.3 Backup 52
4.4 Intelligent Playback 57
4.5 Section Playback 60
4.6 Clips Playback 62
4.7 POS Play 64
4.8 Alarm Log Play 66
4.9 Picture View 68
5 E-Map 70
5.1 E-Map Operations 71
5.1.1 Map Operation 71
5.1.2 Hot Spot Operation 72
5.1.3 Add map link operation 74
5.1.4 Alarm spot operation 75
5.1.5 Map preview operation 76
6 Configuration 78
6.1 General Settings 79
6.2 Network 81
6.3 Camera Settings 83
6.3.1 Add Camera 83
6.3.2 Modify Camera Info 85
6.3.3 Delete Camera 89
6.3.4 Reboot Camera 89
6.3.5 Enable/Disable Camera 89
6.4 Group 90
6.4.1 Add Group 90
6.4.2 Modify Group 91
6.4.3 Delete Group 91
6.5 Record Schedule 92
6.5.1 Add Record Schedule 92
6.5.2 Modify Record Schedule 94
6.5.3 Delete Record Schedule 95
6.5.4 Record Schedule Template 95
6.6 Alarm Linkage 97
6.6.1 Add Alarm Linkage 97

6.6.2 Modify Alarm Linkage....103
6.6.3 Delete Alarm Linkage....105
6.7 Peripheral....107
6.7.1 SMS Configuration....108
6.7.2 PTZ COM Port Configuration....108
6.7.3 Alarm Box Configuration....108
6.8 User Configuration....111
6.9 Others....113
7 Appendix....116
7.1 Technical Terms....116

1 Brief Introduction

iVMS-2000 is a hybrid PCDVR software designed by HIKVISION. It supports full range of HIKVISION card and IP camera connection, and can be widely used in local & remote surveillance of supermarkets, stores, districts and residential places, etc.

This user manual describes the function, configuration and operation steps of iVMS-2000 software. To ensure the properness and stability of software, please kindly refer to the contents below and read the manual carefully before installation and operation. This user manual can be acquired via your supplier.

1.1 iVMS-2000 System Solution

Figure 1-1 describes the widely application usage of iVMS-2000.

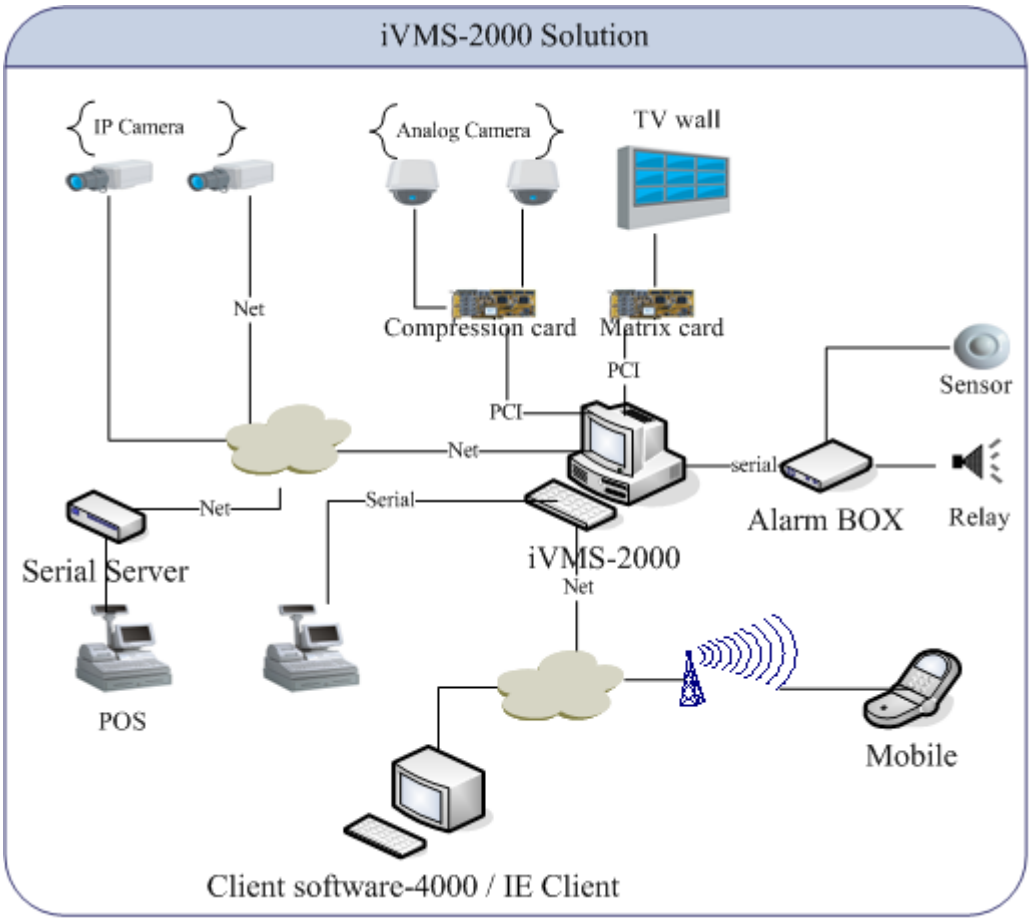


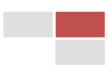
Figure 1-1 iVMS-2000 System Solution

1.2 iVMS-2000 Main Features

1. Support 64 camera camera input (32 camera IPC + 32 camera analog camera)
2. Support multiple VGA display
3. Support real time monitoring of PC CPU, network and hard disk condition, and alarm can be triggered on system exception
4. Support software watchdog function
5. Support POS connection
6. Support over 80 PTZ protocols
7. Support various video live-view modes
   a) Support live-view group settings
   b) Support switch view by group or auto-switching under current screen-slip mode
   c) Self-adaptive to different VGA resolution, and displays under appropriate screen-split viewing mode accordingly.
   d) Support preview window selection by dragging the camera camera to its specific position
   e) Support original size or Full-screen live-view
   f) Support digital zoom
   g) Support PTZ control on live-view image
   h) Support snapshot of live-view image
   i) Support output live-view to TV Wall
   j) Support instant playback function for fast viewing of recent events
8. Record and Storage Function
   a) Support hard disk pre-allocation for more secure and stable recording performance
   b) Support motion recording, schedule recording, manual recording and alarm recording.
   c) Provide various record schedule to facilitate user configuration
   d) Provide easy encode parameter configuration mode, while also provide advanced encode parameter settings for professional users
   e) Support separate encoding configuration for alarm recording mode
9. External Alarm Configuration
   a) Support multiple alarm types, including sensor input, motion detection, camera view blocking, video loss, system exception, etc.
   b) Support various alarm triggered event configuration including record, PTZ action, Email, SMS, sensor output, audio sound, Live-view prompt, E-map prompt, etc
   c) Support 24-hour guard schedule
   d) Support manual-triggering mode for sensor output
10. Record Search & Playback
    a) Search video by time
       1. Smart search
       2. Search video according to time period
       3. Support up to 16 camera synchronized playback
    b) Search video according to POS transaction information
    c) Search video according to alarm information

d) Support video clip playback
e) Display relative alarm info during playback
f) Various playback control functions including Play/Pause/ Stop/ Fast Forward/ Slow Forward/ Step Forward/ Replay from last minute/ Jump to next minute/ Loop playback (A-B)
g) Support clip file function (A-B)
h) Support snapshot of playback image
i) Support digital zoom of playback image
j) Support output playback image to TV wall
k) Support Brightness/ Contrast/ Hue/ Saturation adjusting during playback

11. E-map Functions
    a) Support adding of surveillance spots, alarm spots and sub map connection
    b) Support live-view image display on E-Map
    c) Convenient Zoom In/Zoom out / Move operation
12. Network functions
    a) Support remote connection via Hikvision Client 4000V2.0 software
    b) Support IE client connection
    c) Support mobile-phone connection
    d) Support DDNS protocol
    e) Support Hikvision SADP protocol which can automatically find all the HIKVISION IPC on-line



2 Install and Uninstall

2.1 Installation

Please refer to the following steps during iVMS-2000 installation.

Step1: Insert the iVMS-2000 installation CD into the PC CD-ROM, and run Setup.exe on the CD. The install shield dialog box will be displayed (Figure 2-1), and dialog box as Figure 2-2 will be displayed a few seconds later (the time interval depends on the PC configuration).

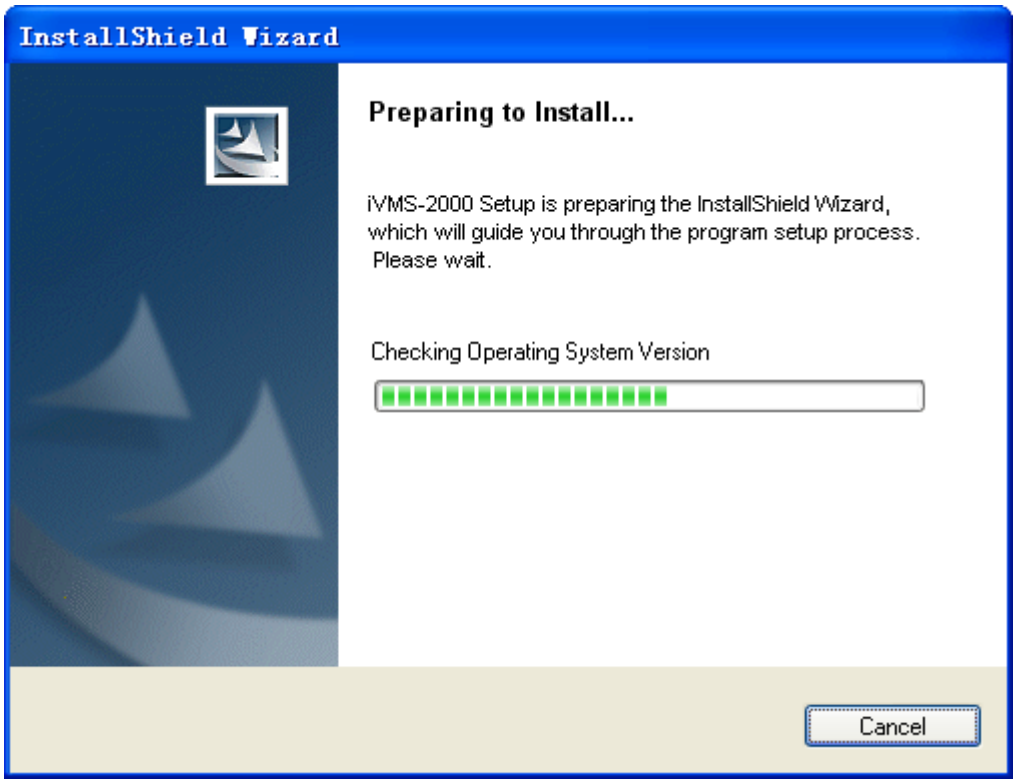

InstallShield Wizard
Preparing to Install...
iVMS-2000 Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.
Checking Operating System Version
Cancel

Figure2-1 Preparing to Install

Step2: Click “Next (N)” (Figure 2-2) and select the installation path (Figure 2-3), or click “Cancel” to cancel the installation.

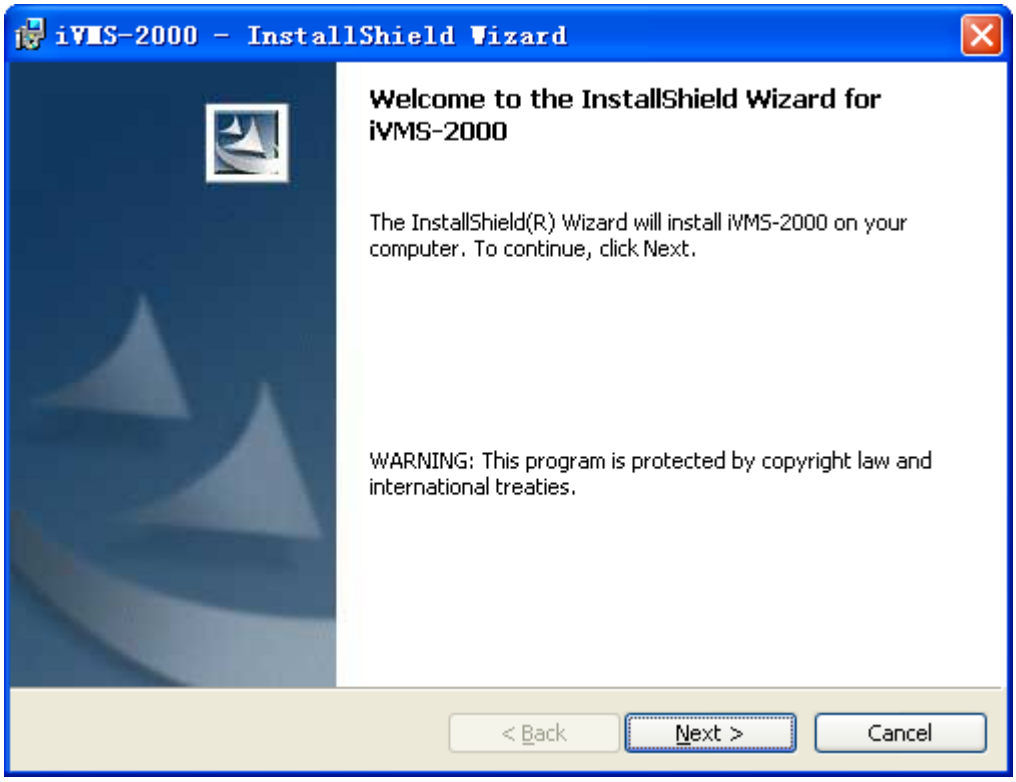

iVMS-2000 - InstallShield Wizard
Welcome to the InstallShield Wizard for iVMS-2000
The InstallShield(R) Wizard will install iVMS-2000 on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

Figure 2-2 Welcome Interface

Step3: Click “Change(C)…” to modify software installed location (Figure 2-3), and click “Next” to continue (Figure 2-4), or click “Back” to return to Welcome Interface, or click “Cancel” to exit the Installation.

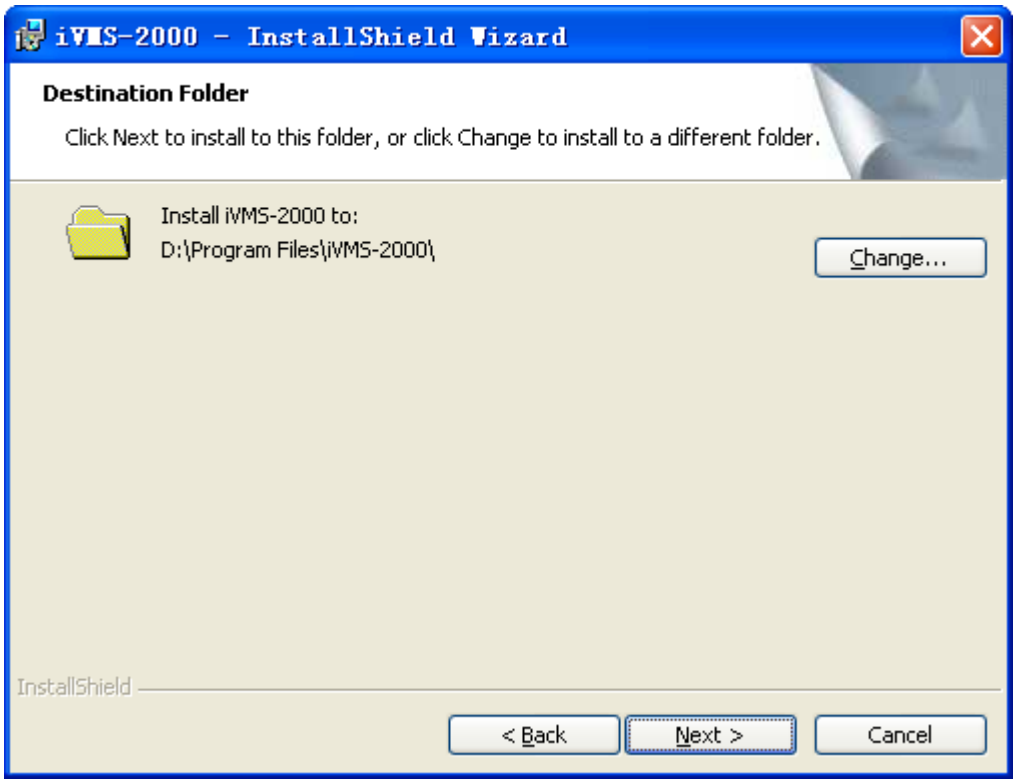


Figure 2-3 Select Installation Path

Step4: Click "Install (I)" in the dialog box as Figure 2-4 to start iVMS-2000 installation (Figure 2-5), or click "Back (B)" to return to Select Installation Path (Figure 2-3). Click "Cancel" to exit the Installation.

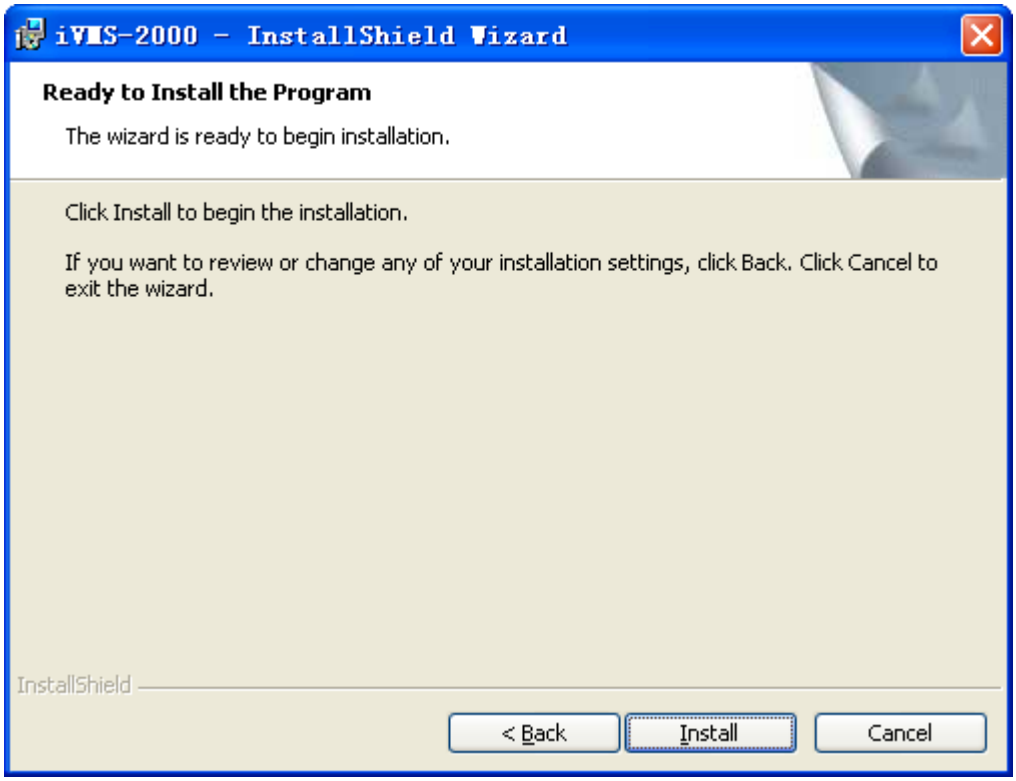

iVMS-2000 - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

Figure 2-4 Ready to Install

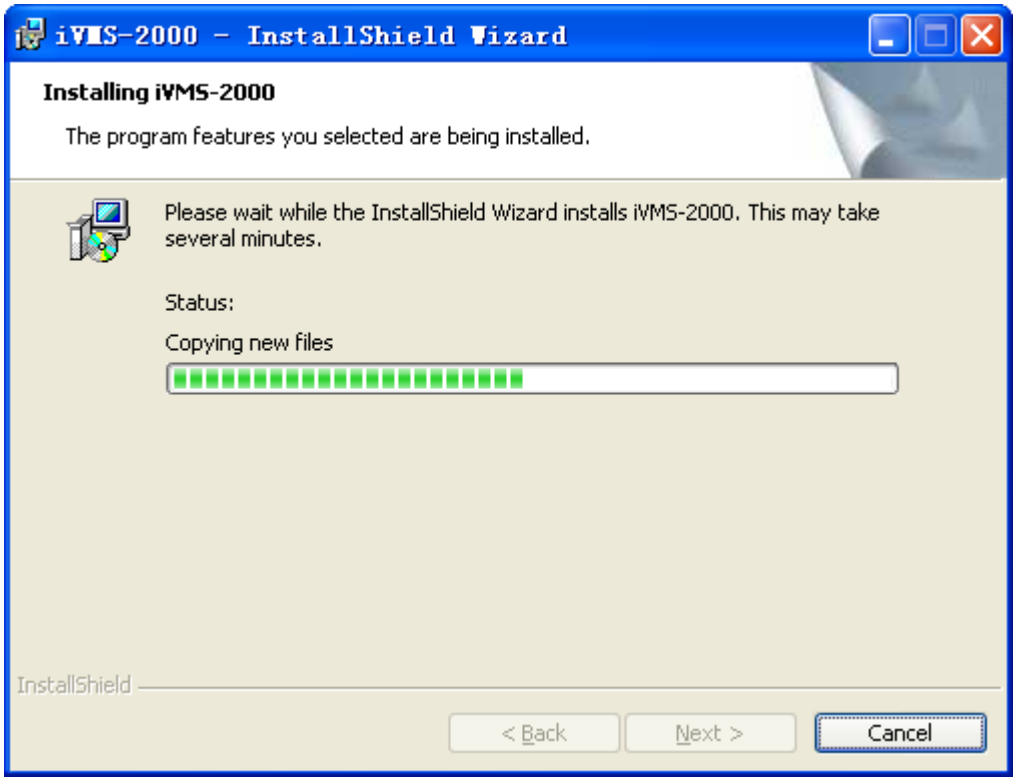

iVMS-2000 - InstallShield Wizard
Installing iVMS-2000
The program features you selected are being installed.
Please wait while the InstallShield Wizard installs iVMS-2000. This may take several minutes.
Status:
Copying new files
InstallShield
< Back
Next >
Cancel

Figure 2-5 Installing

Step5: In Figure 2-5, a WinPcap installation wizard will pop up(It can not automatically detect and

add IPC if you have not installed WinPcap), and click “Next” to start WinPcap installation (Figure 2-8). Click “Next” to continue, or click “Cancel” to cancel Installation and go to the Installation Complete Interface directly (Figure 2-12).

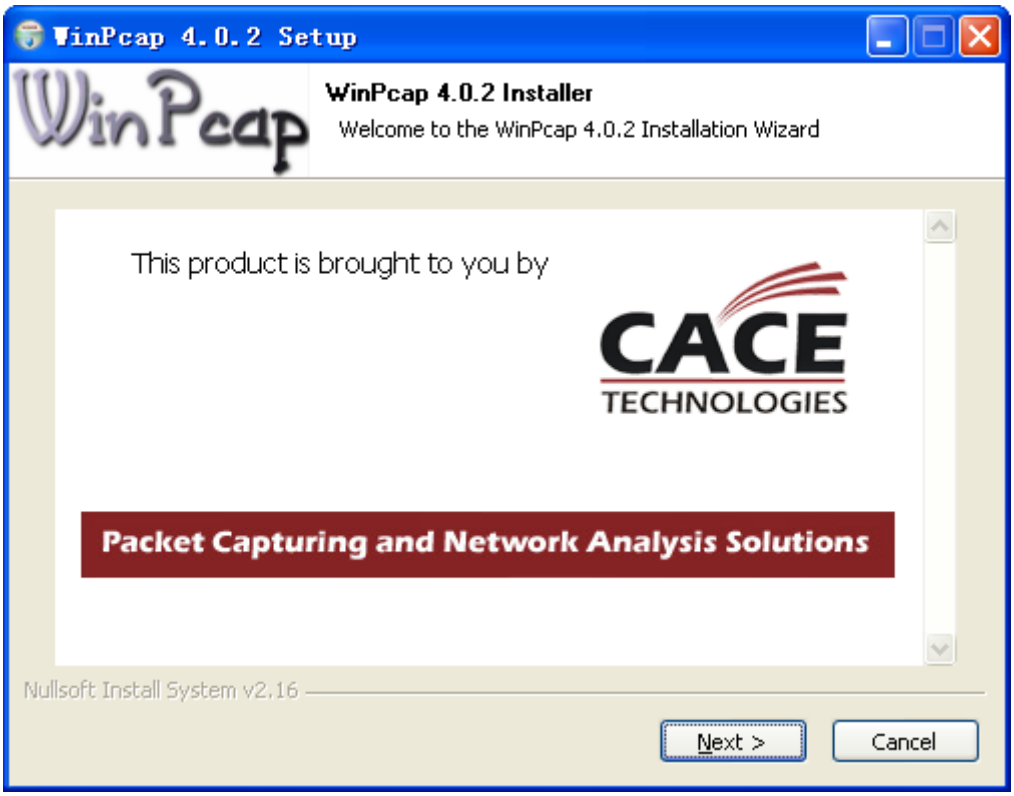


Figure 2-6 Ready to Install WinPcap

If WinPcap has already installed on the PC, warning message box will prompt (Figure 2-7). Click “OK” to reinstall WinPcap, or click “Cancel” to skip WinPcap installation and go to Installation Complete Interface directly (Figure 2-12).

WinPcap 4.0.2 Setup
WinPcap 4.0.2 is already installed on this machine.
Press Ok if you want to force the installation, or Cancel if you want to abort the installation.
确定
取消

Figure 2-7 Warning: WinPcap is already installed on the PC

Step6: In Figure 2-8, click “Next” to enter the license agreement interface (Figure 2-9). Click “Back” to return to Figure 2-6, or click “Cancel” to skip WinPcap Installation and go to Installation Complete Interface directly (Figure 2-12).

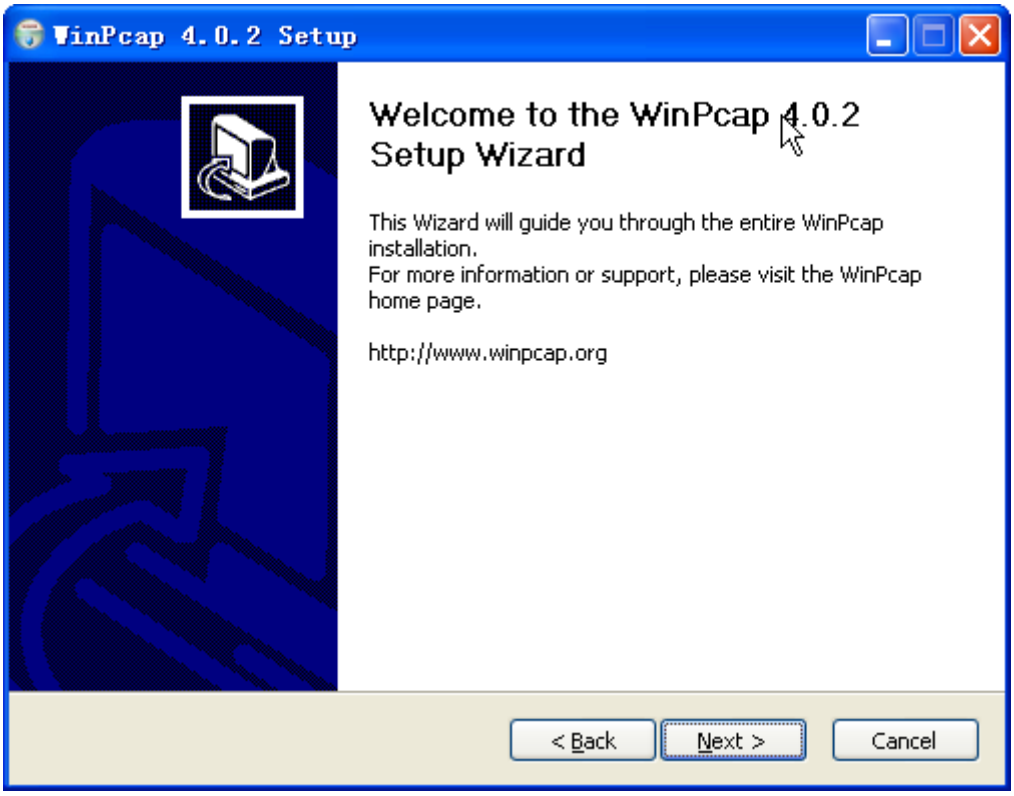

WinPcap 4.0.2 Setup
Welcome to the WinPcap 4.0.2 Setup Wizard
This Wizard will guide you through the entire WinPcap installation.
For more information or support, please visit the WinPcap home page.
http://www.winpcap.org
< Back
Next >
Cancel

Figure 2-8 Welcome Interface for WinPcap

Step7: In Figure 2-9, click “I Agree” and start WinPcap installation if you accept the license agreement, or click “Back” to return to Figure 2-8. Click “Cancel” to skip WinPcap installation and go to Installation Complete Interface directly (Figure 2-12).

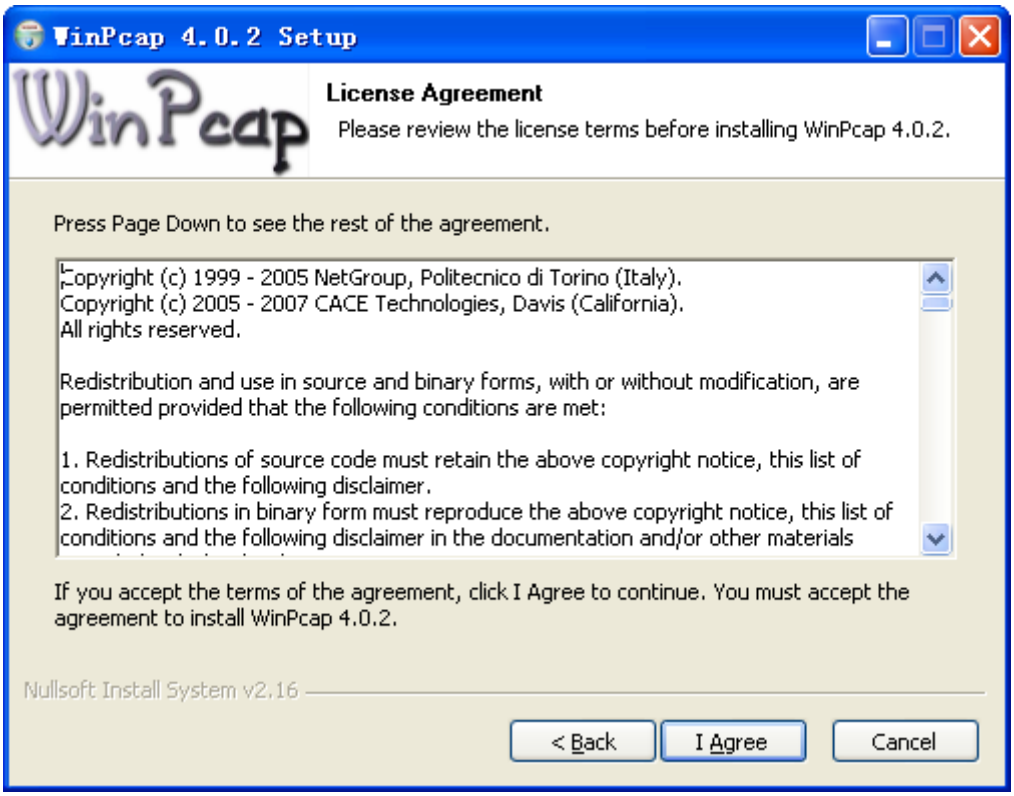

WinPcap 4.0.2 Setup
License Agreement
Please review the license terms before installing WinPcap 4.0.2.
Press Page Down to see the rest of the agreement.
Copyright (c) 1999 - 2005 NetGroup, Politecnico di Torino (Italy).
Copyright (c) 2005 - 2007 CACE Technologies, Davis (California).
All rights reserved.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:
1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install WinPcap 4.0.2.
Nullsoft Install System v2.16
< Back
I Agree
Cancel

Figure 2-9 WinPcap license agreement

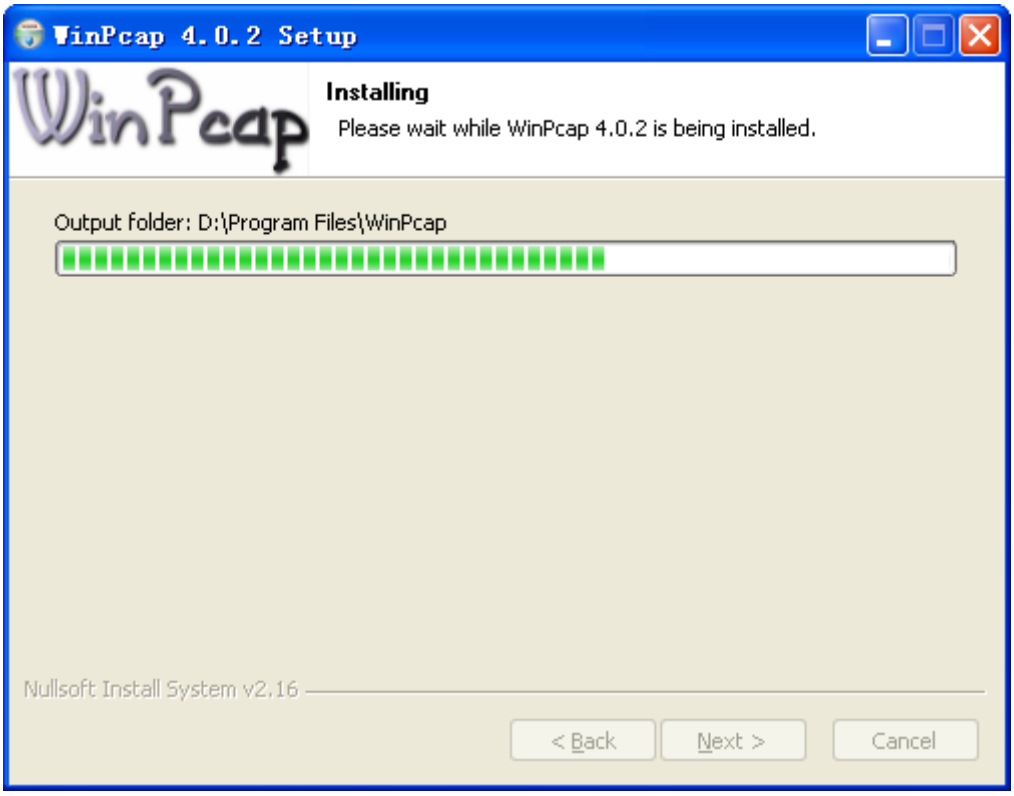


Figure 2-10 Installing WinPcap

Step8: After WinPcap is installed, an Installation Complete Interface (Figure2-11) will pop up. Click "Finish" to complete the installation.

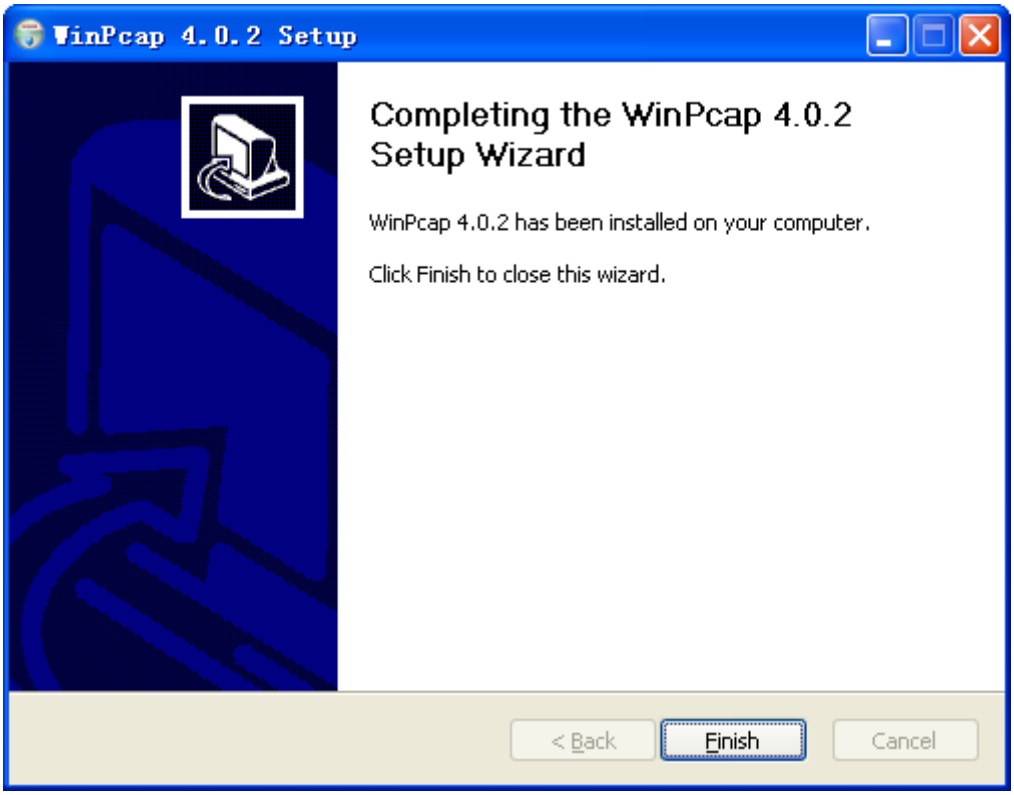


Figure 2-11 WinPcap Installation Complete

Step9: After WinPcap installation finished, iVMS-2000 Installation Complete Interface will pop up (Figure 2-12), click “Finish” to complete the iVMS-2000 installation process.

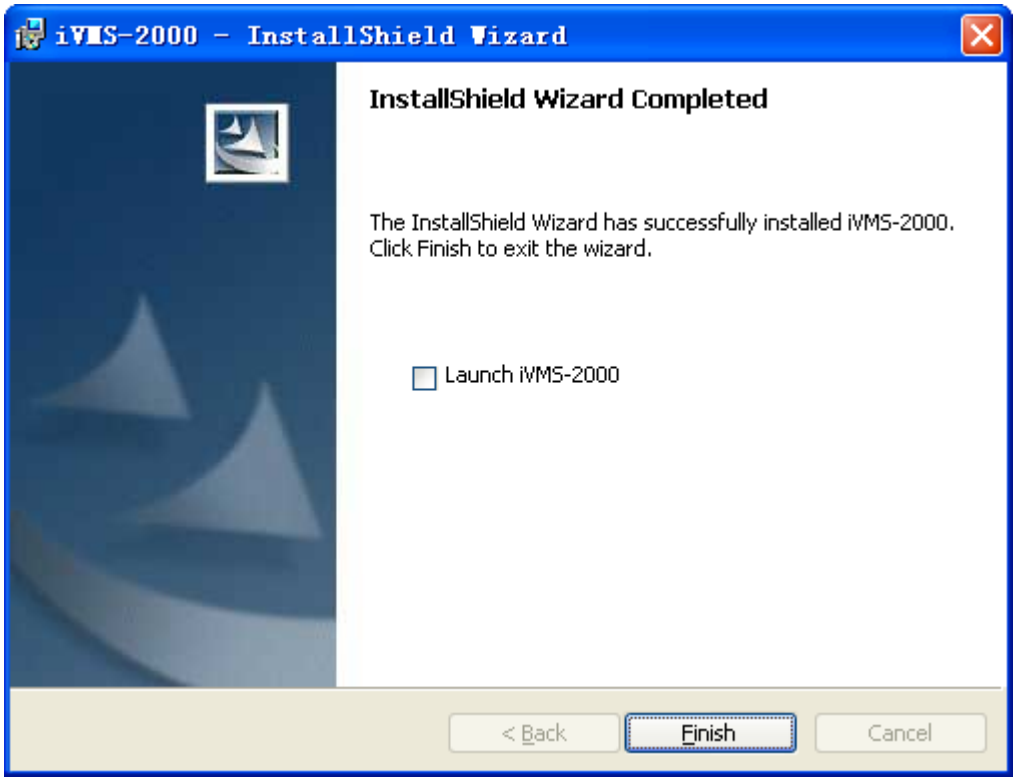


Figure 2-12 iVMS-2000 Installation Complete Interface

Note:For Windows Operating System below Vista, users need to install Windows updates before using CD/DVD backup function (Install the file in CD: WindowsXP-KB932716-v2-x86-ENG.exe).

2.2 Uninstall

Please refer to the following steps before removing iVMS-2000 systems from personal computers.

Step1: Select “All programs” -> “WinPcap” -> “Uninstall WinPcap” in the start menu of the Windows operating system, and click “Uninstall” in the prompt dialog box (Figure 2-13) to uninstall the WinPcap.

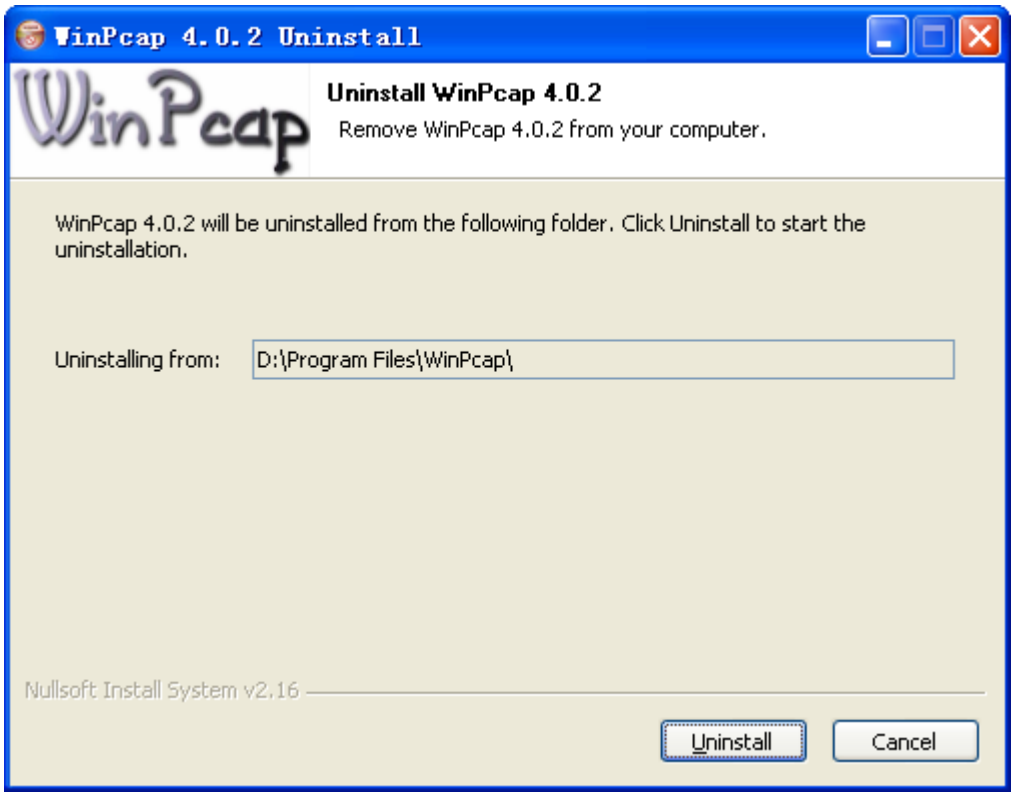

WinPcap 4.0.2 Uninstall
Uninstall WinPcap 4.0.2
Remove WinPcap 4.0.2 from your computer.
WinPcap 4.0.2 will be uninstalled from the following folder. Click Uninstall to start the uninstallation.
Uninstalling from:
D:\Program Files\WinPcap\
Nullsoft Install System v2.16
Uninstall
Cancel

Figure 2-13 WinPcap Uninstall Interface

Step2: WinPcap un-installation takes only a few seconds, after the un-installation is complete, click “Finish” in the prompt dialog box (Figure 2-14) to finish the un-Installation.

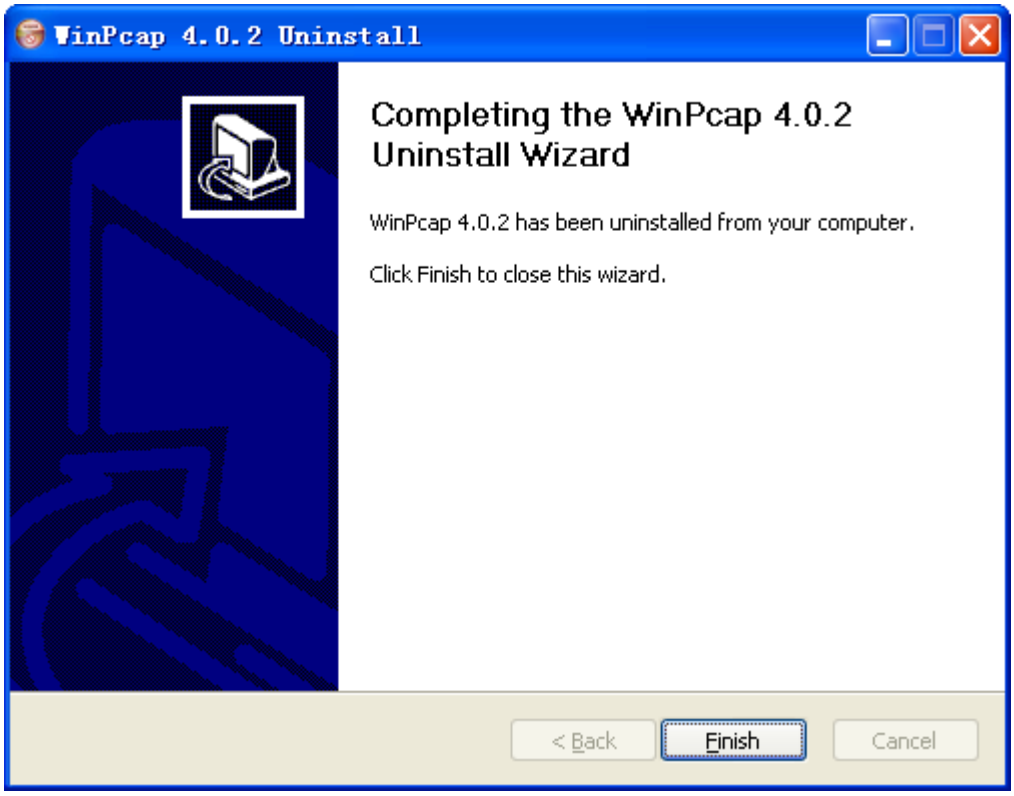


Figure 2-14 WinPcap Un-installation Complete

Step3: Select "All programs"→" iVMS-2000"→"Uninstall iVMS-2000" in the start menu of Windows OS, and click "Uninstall" in the prompt dialog box (Figure 2-15) to start to uninstall the iVMS-2000.

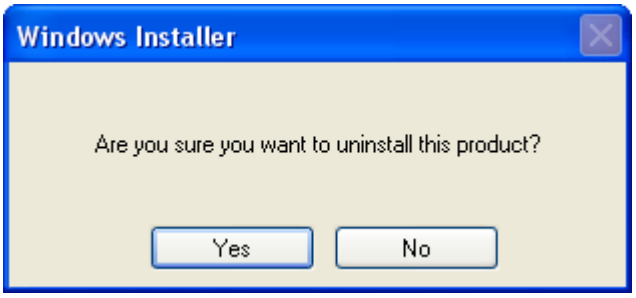


Figure 2-15 iVMS-2000 Un-install Prompt

Step4: As shown in Figure 2-16, WinPcap un-installation process will takes some tens of seconds.

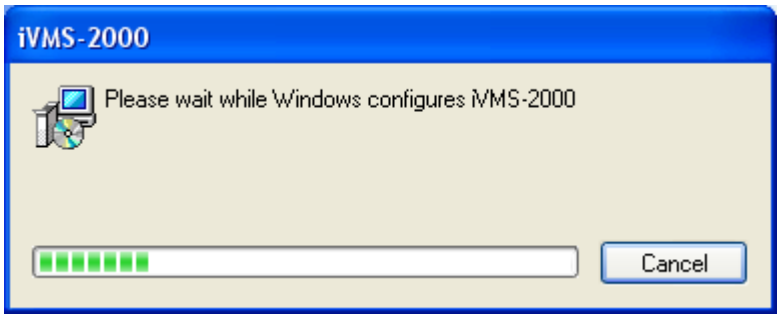


Figure 2-16 iVMS-2000 Un-installing

Step5: Uninstall completed.

2.3 Start iVMS-2000

Double click the shortcut iVMS-2000 on system desktop, and please input default user name: **admin**, password: **12345** in the login dialog box (Figure 2-17).

Figure 2-17 iVMS-2000 Login

Click “Login” and a dialog box will prompt if no disk is pre-allocated (Figure 2-18), click “OK” to enter Disk Management(Figure 2-19); or click “Cancel” to start the software directly without local recording function.

Figure 2-18 Disk Management

The Un-allocated disks will be listed as available partitions. Select the partitions for recording and click “Add” button to pre-allocate space. After pre-allocation, the state of partition will be displayed as “allocated”. Select one pre-allocated disk and click “Delete” to remove the disk out of the list, but the previous record files and pre-allocated space still exists in that disk.

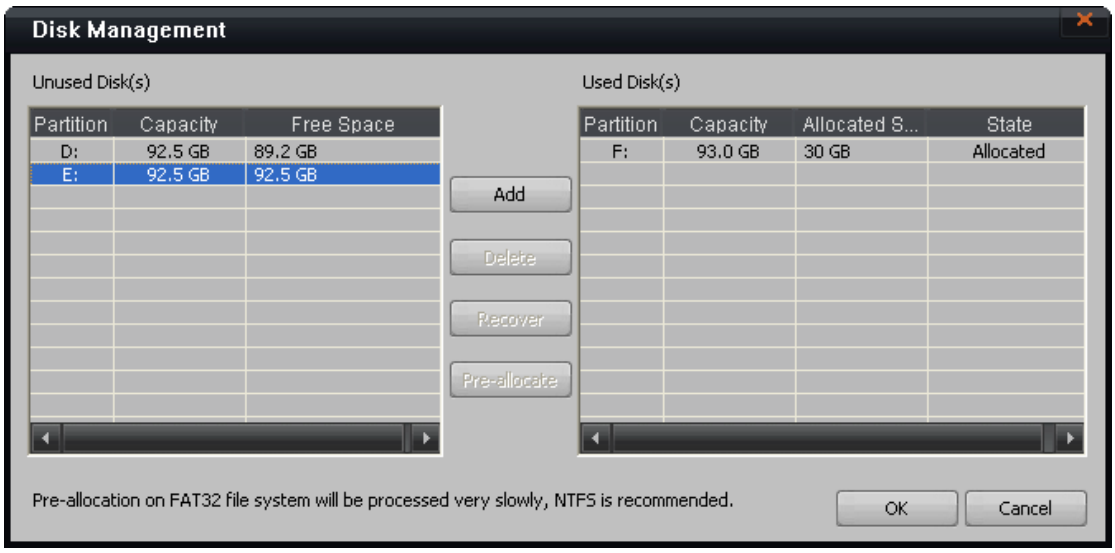


Figure 2-19 Disk Management

After adding pre-allocated hard disks, click “OK” to enter Initializing interface (Figure 2-20)., or click “Cancel” to skip disk pre-allocation and enter iVMS-2000 directly.

Figure 2-20 Initializing

If iVMS-2000 is running for the first time (Figure 2-21), and Hikvision capture card is installed in the PC, then the software will list all the detected analog cameras. For IP camera live preview, you must add IP cameras. (Please refer to 6.3.1 Add Cameras)

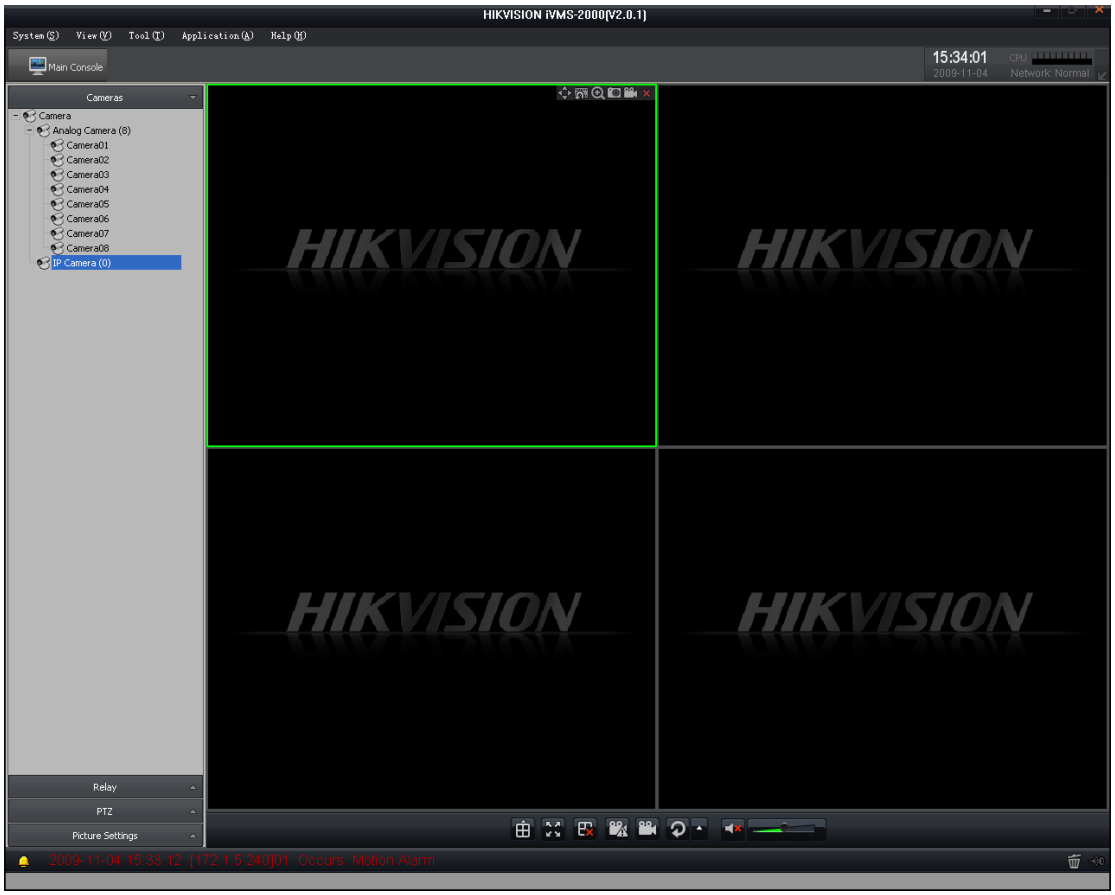


Figure 2-21 Main Interface

3 Main Console

Figure 3-1 Main Console

The following contents is the description of main console, in which **1**, **2**, **3**, **7** are common parts for all iVMS-2000 software interface.

Label	Name	Description
1	**Menu**	Contains System Menu, View menu, Tool Menu, Application Menu and Help Menu
2	**View**	Display unwrapped interfaces and users can drag the relative icon and move the interface out of the main console, and output onto another monitor.
3	**Status**	Display current time, CPU usage and network connections. In the bottom of the panel, there is also information of login user, disk usage and the number of network users accessing iVMS-2000.
4	**Control Lists**	Display current IP and analog cameras connected, alarm output settings, PTZ control and video parameters adjusting.
5	**Live Preview**	Display camera video connected with fast operation buttons such as PTZ control, instant replay, electronic amplification, capture pictures

		and record, etc.
6	**Control Icons**	Control the whole live preview area, including window-split mode, full screen, emergency record, manual record and auto switch.
7	**Alarm Info**	Display current alarm information in real time, including the occurrence time of alarm, alarm source, alarm type. You could get more alarm information by clicking the column.

3.1 Menu

The Menu Bar is constituted by System (S), View (V), Tools (T), Application (A), and Help (H) menu (Figure 3-2).

Figure 3-2 Menu Bar

3.1.1 System Menu

System Menu is mainly used for software login/logout and also loading/backup of configuration information, etc (Figure 3-3).

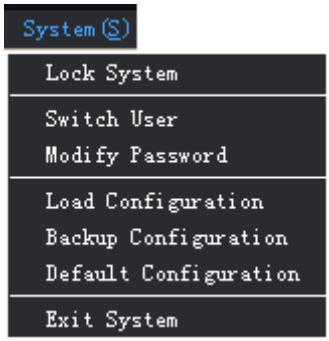


Figure 3-3 System Menu

[Lock System]

Lock current iVMS-2000 and you will not be able to carry on any operations. This option will be displayed as “Login System” after locked up, and you can click it to login again and unlock the operation.

[Switch User]

Switch current users.

[Modify Password

Modify login password for the current user. Your password will be changed after input original password, new password and confirm password (Figure 3-4).

Figure 3-4 Modify Password

[Load Configuration]

Load configuration files exported previously into the software. Restart iVMS-2000 to take effect.

Note: Configuration files that you want load should be located under CONFIG folder of iVMS-2000 directory.

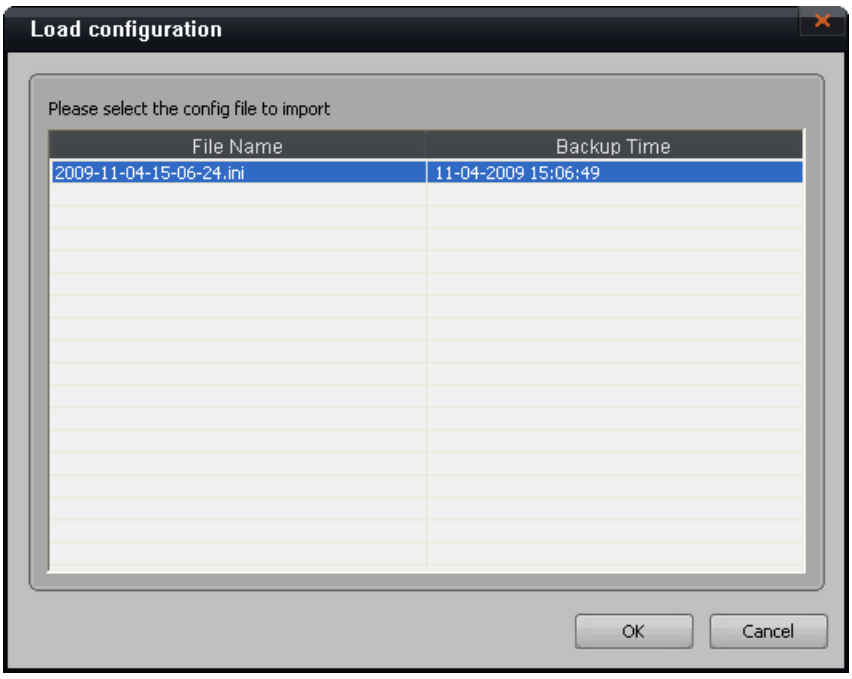


Figure 3-5 Load Configuration

[Backup Configuration]

Export configuration files for later to load. Default name of the configuration file is current time. See Figure 3-6.

Note: You can find configuration files under CONFIG folder.

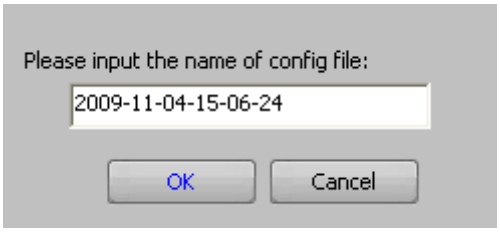


Figure 3-6 Backup Configuration

[Default Configuration]

Set configuration parameters to default value. Restart the software to take effect.

Note: The logs, users, disk partition will not be reset to the initial state.

[Exit System]

Exit iVMS-2000.

3.1.2 View Menu

The View Menu is mainly for open/close view windows. View windows includes Main Console, Aux preview, Playback, Config, E-Map and TV-Wall (Figure 3-7).

Figure 3-7 View Menu

[Open All]

Open all view icons on the Tab Bar below Menu Bar.

[Close All]

Close all view opened on Tab Bar except Main Console.

[Aux Preview], [Playback], [Config], [E-Map], [TV-Wall]

Click any of the items to open/close relative view page.

Note: The Main Console cannot be closed and Aux Preview function will be available when you have several monitors.

3.1.3 Tool Menu

Tool menu contains some tools and functions of iVMS-2000 (Figure 3-8).

Figure 3-8 Tool Menu

[Backup]

Backup recorded video, see 4.3 Backup for more details.

[Disk Management]

Add/Pre-allocate/Delete record disk.

The available partitions will be listed as Unused Disk (Figure 3-9) and the pre-allocated disk partitions will be listed as Used Disk. Select the partitions for recording and click "Add" button to pre-allocate its disk space. Select one used disk and click "Delete" to remove it

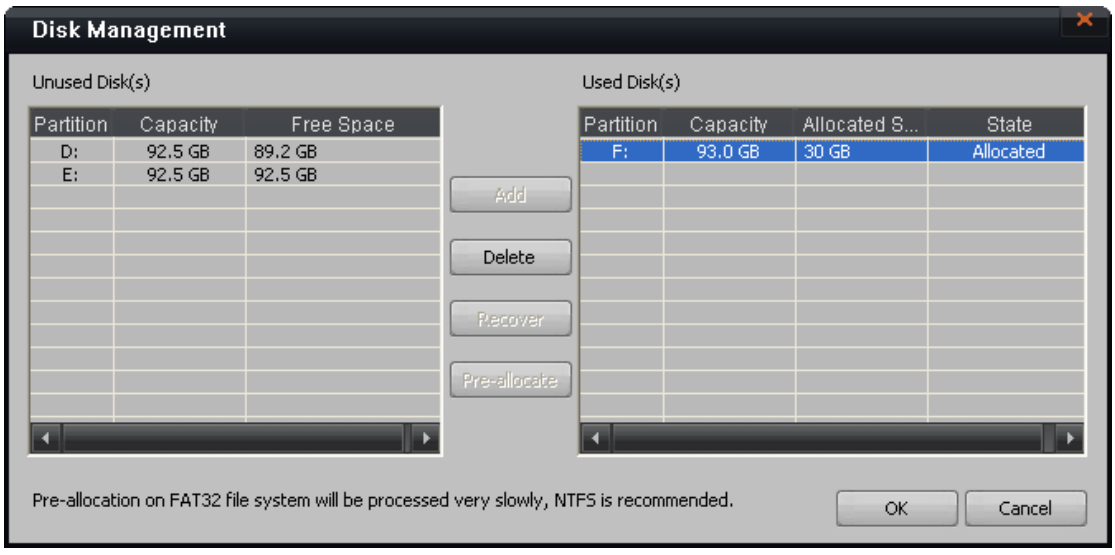


Figure 3-9 Disk Management

Note:

- **The iVMS-2000 can't start record until user has allocated and formatted the disk.**
- **Modification for disk partitions will take effect after restart the software.**
- **The available partition should have more than 2GB free space.**
- **It is recommended to use partitions in NTFS format for higher allocating speed**

[System Log]

Query, export or delete the software operation log.

Click "Log Type" drop-dawn list to select type, set start time and end time, and click button to start to query. Click [Backup Log] button to export log file.

If the search duration exceeds one day, then the system will enumerate the data in the Query Data list (Figure 3-10). Select the date and the log of that day will appear.

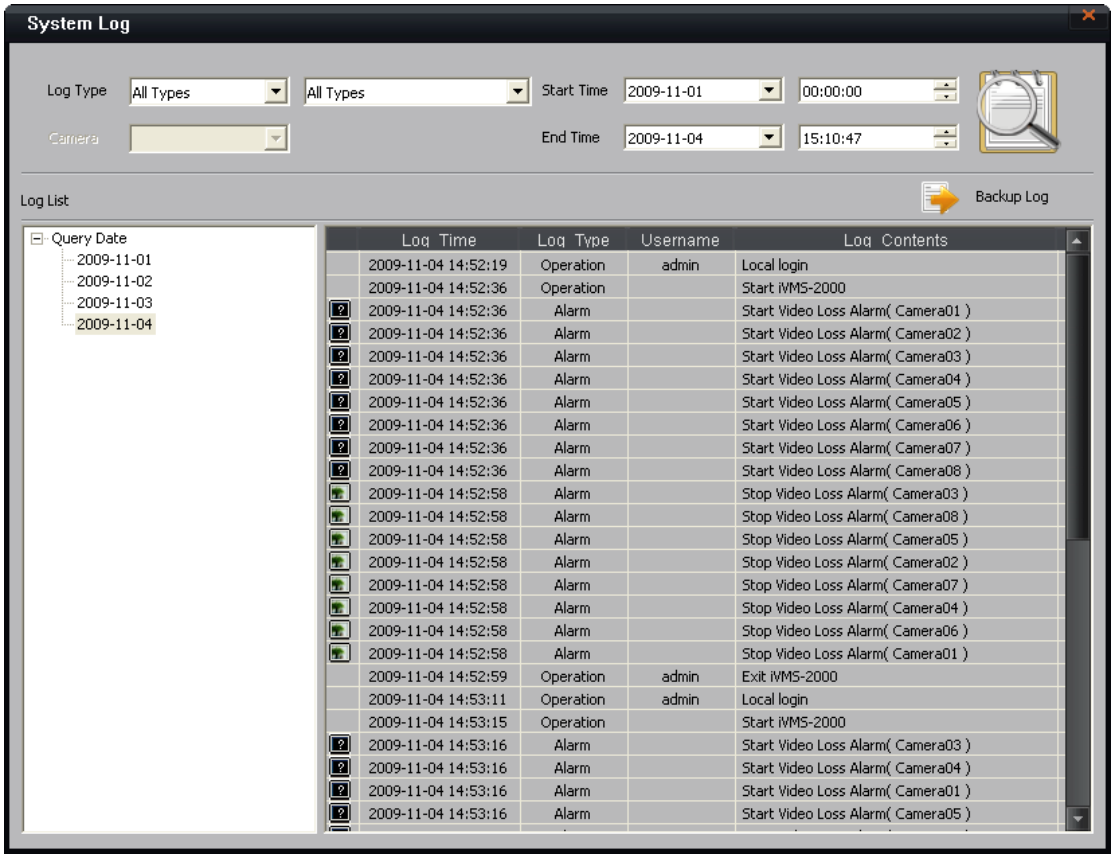

System Log
Log Type
All Types
All Types
Start Time
2009-11-01
00:00:00
Camera
End Time
2009-11-04
15:10:47
Log List
Backup Log
Query Date
2009-11-01
2009-11-02
2009-11-03
2009-11-04
Log Time
Log Type
Username
Log Contents
2009-11-04 14:52:19 Operation admin Local login
2009-11-04 14:52:36 Operation Start iVMS-2000
2009-11-04 14:52:36 Alarm Start Video Loss Alarm(Camera01)
2009-11-04 14:52:36 Alarm Start Video Loss Alarm(Camera02)
2009-11-04 14:52:36 Alarm Start Video Loss Alarm(Camera03)
2009-11-04 14:52:36 Alarm Start Video Loss Alarm(Camera04)
2009-11-04 14:52:36 Alarm Start Video Loss Alarm(Camera05)
2009-11-04 14:52:36 Alarm Start Video Loss Alarm(Camera06)
2009-11-04 14:52:36 Alarm Start Video Loss Alarm(Camera07)
2009-11-04 14:52:36 Alarm Start Video Loss Alarm(Camera08)
2009-11-04 14:52:58 Alarm Stop Video Loss Alarm(Camera03)
2009-11-04 14:52:58 Alarm Stop Video Loss Alarm(Camera08)
2009-11-04 14:52:58 Alarm Stop Video Loss Alarm(Camera05)
2009-11-04 14:52:58 Alarm Stop Video Loss Alarm(Camera02)
2009-11-04 14:52:58 Alarm Stop Video Loss Alarm(Camera07)
2009-11-04 14:52:58 Alarm Stop Video Loss Alarm(Camera04)
2009-11-04 14:52:58 Alarm Stop Video Loss Alarm(Camera06)
2009-11-04 14:52:58 Alarm Stop Video Loss Alarm(Camera01)
2009-11-04 14:52:59 Operation admin Exit iVMS-2000
2009-11-04 14:53:11 Operation admin Local login
2009-11-04 14:53:15 Operation Start iVMS-2000
2009-11-04 14:53:16 Alarm Start Video Loss Alarm(Camera03)
2009-11-04 14:53:16 Alarm Start Video Loss Alarm(Camera04)
2009-11-04 14:53:16 Alarm Start Video Loss Alarm(Camera01)
2009-11-04 14:53:16 Alarm Start Video Loss Alarm(Camera05)

Figure 3-10 Log Management

[Work Log]

If there is some other situation in the course of duty, you can add notes here for later query.

Click "Submit" button to save work log after filling in your information (Figure 3-11), and click "Search" to query work information saved previously (Figure 3-12).

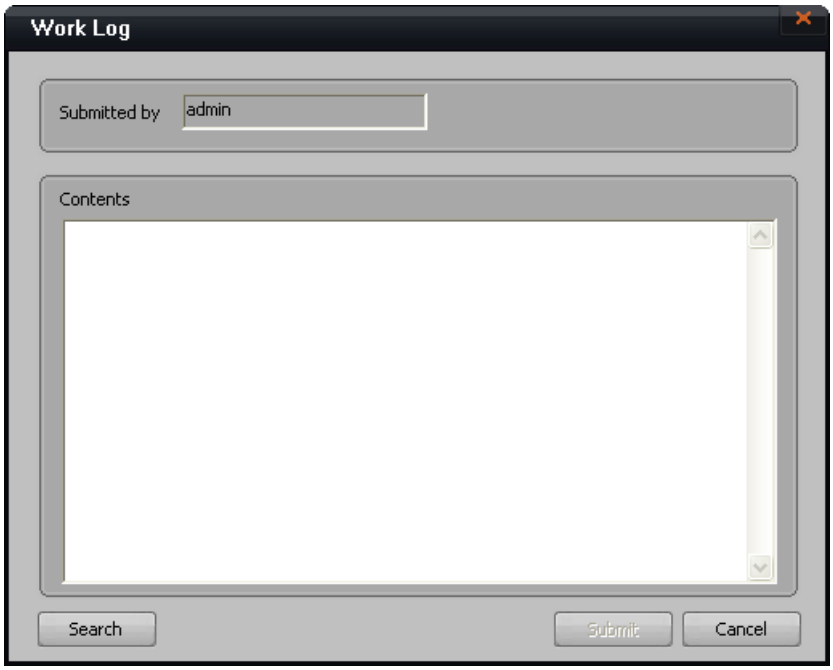


Figure 3-11 Work Log

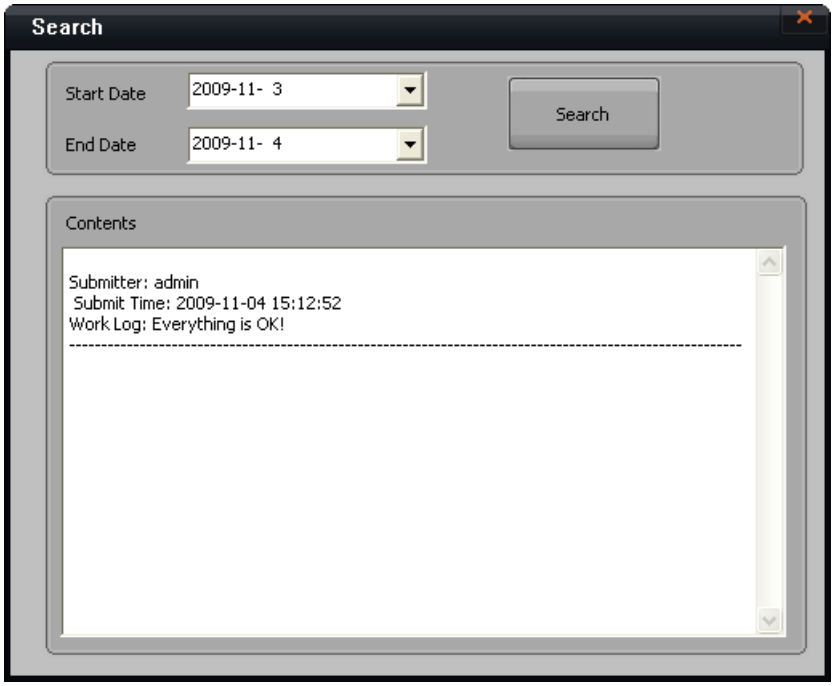


Figure 3-12 Work Log Query

[Picture Viewer]

View & modify pictures captured in the process of preview or playback. (See 4.9 Picture Viewer for more)

[Shortcut Key]

Set shortcut key for the system in order to facilitate efficient operation of the software.

Select one shortcut key and click "OK" to enable it. By default, all the shortcut keys are enabled. Preview Full Screen and Playback Full Screen are effective only in preview and playback interfaces.

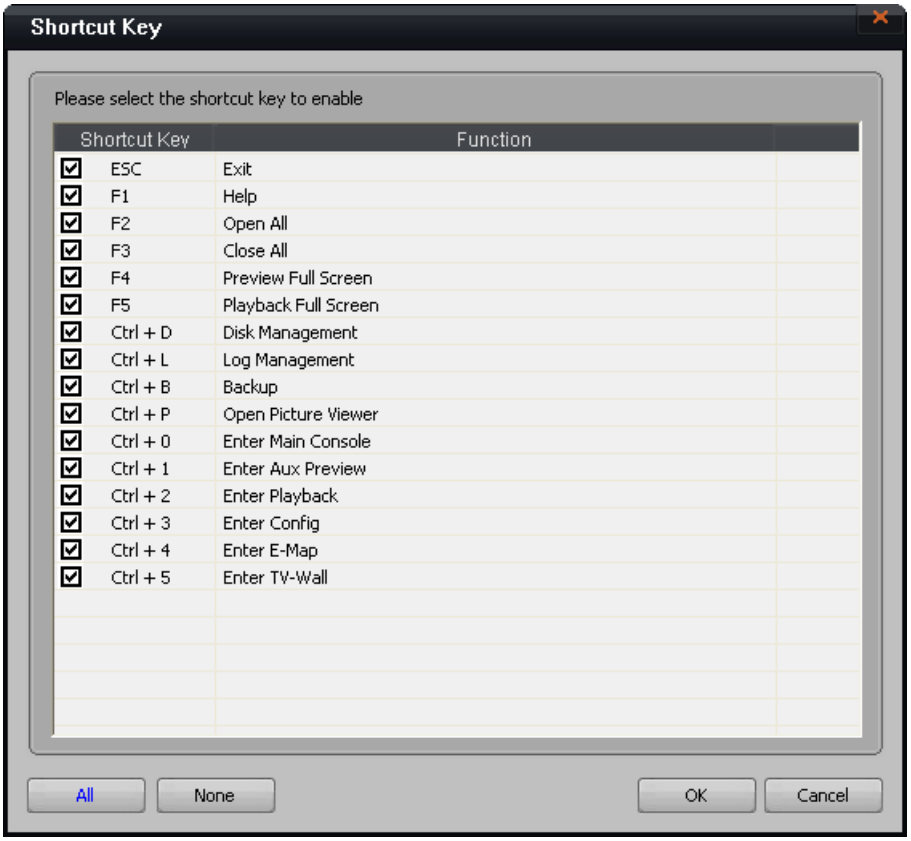


Figure 3-13 Shortcut Key Configuration

[Connection Management]

Manage network connections and set up blacklist.

As shown in Figure 3-14, all current clients IP and cameras connected will be enumerated in Client IP and Connected Cameras list. IP in blacklist can not connect to the system.

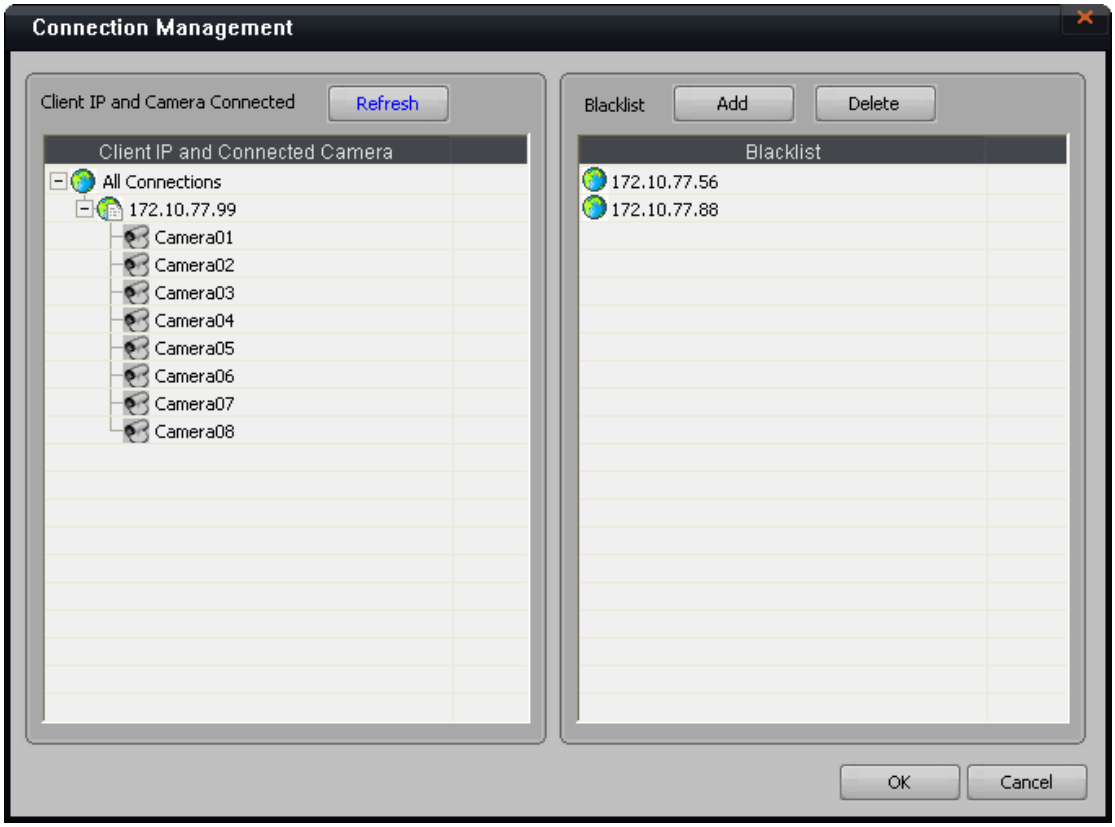


Figure 3-14 Connection Management

[On-screen Keyboard]

Open the soft keyboard which the system contains.

[Windows Explorer]

Open the windows explorer.

[Run External Program]

Open another executable program.

[Lock System Key]

Lock some keys that can switch interface of iVMS-2000 such as Win, Alt+Tab, ATrl+Alt+Del, and Alt+Esc.

3.1.4 Help Menu

Help Menu consists of About iVMS-2000 and User Manual.

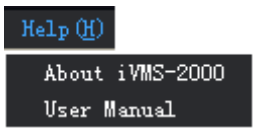


Figure 3-15 Help Menu

[About]

Show information of iVMS-2000.

[User Manual]

Open iVMS-2000 user manual, namely this manual.

3.2 Live preview

Please make sure that you have added IP cameras or analog cameras before start live preview. (See 6.3.1 for more details). As shown in Figure 3-16, 8 IP cameras and 8 analog cameras are connected to the system.

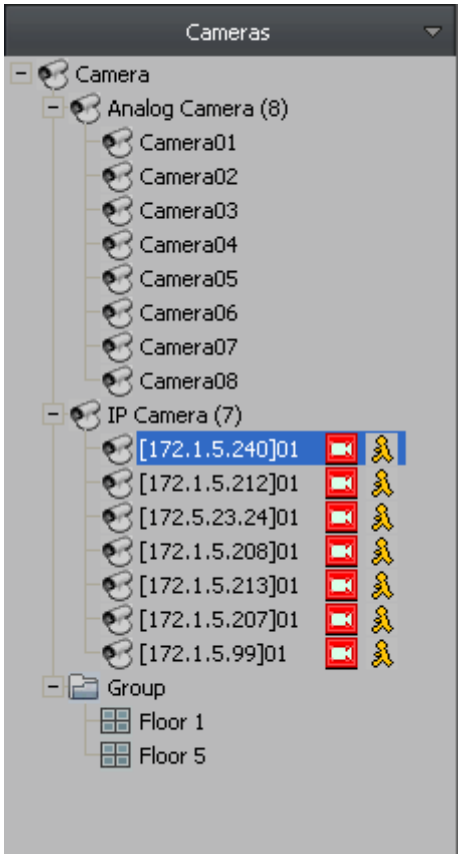


Figure 3-16 Camera (Camera) List

The following list describes the meaning of cameras and status icons:

Icon	Description
	Camera is connected and works normally.
	Camera is disconnected.
	Camera is recording.
	Camera is alarming.

3.2.1 Live Preview specified camera

You can live preview specified camera by selecting and double-clicking the left mouse button on the camera that you want to live preview. The camera image will be displayed in selected window. You can

also do that by dragging the selected camera to a window.

3.2.2 Live Preview multiple cameras

If you want to live preview several cameras in current division mode (IP cameras or analog cameras), you could dragging the root node into live preview area to achieve that. For example, if the play area is divided into 4 parts, 4 cameras will be displayed in turn in four windows. If the play area is divided into 9 parts, all 8 analog cameras will be displayed.

3.3 Live Preview in Group

Please make sure that you have added camera group before playing in group(See 6.4.1 Add Group for more). As shown in Figure 3-2, two groups have been added.

3.3.1 Live Preview Specified Group

Double click the group name in camera list to live preview the corresponding cameras of the group in the live preview area. And the windows of live preview area will be divided into the division configured when grouping cameras. You can also live preview them by dragging them to the play windows.

3.3.2 Cycle Live Preview of Group

You can start cycle live preview of current groups. Double click the group node and all the cameras of the group begin to cycle in the live preview area and the windows is divided into the division configured when grouping cameras. Each group stays for configured time and then switch to next group. You can also live preview them by dragging them to the play windows.

3.4 Operation on Live Preview Windows

There is a tool bar in a selected live preview window; it supports some operations to the selected window.

3.4.1 Quick PTZ Control (Screen PTZ Control)

: Control PTZ of camera which the user have operational authority, the button will appear and 8 direction icons will be showed pointing up, down, left, right, upper left, upper right, lower left, lower right. An arrow logo will appear when the mouse moved to area identified, click the left mouse button to control PTZ to the corresponding direction, slide the mouse wheel to zoom in / out. Click the button again to exit PTZ control.

3.4.2 Instant Playback

: Instant playback about 1 minute record of current camera (Time length depends on the bit rate of the camera). Click to start instant playback and the tool bar appears . It includes 6 function buttons: Play, Pause, Stop, Step Backward and Step Forward. Click button stop to exit instant playback.

Note: The system can not start record and instant playback without disk pre-allocation.

3.4.3 Digital Zoom

Click the button , a digital zoom window will pop up at lower right 1/9 size of the live preview window,as shown in Figure 3-17.The prompt window contains a red viewfinder box with buttons on the right side. The size of digital zoom viewfinder window could be adjusted by sliding mouse wheel or clicking buttons. Dragging the viewfinder and you will see zoomed image in the live preview window. Click the button again to exit digital zoom.

Figure 3-17 Digital Zoom

3.4.4 Snapshot

Click the button to take Snapshot of current camera. A prompt box will pop up if the operation succeed, as shown in Figure 3-18. Click the picture access path in prompt box to open the picture.

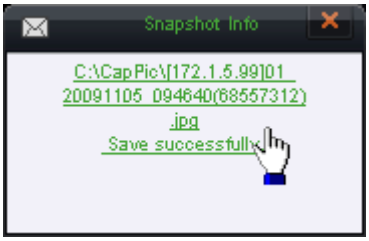


Figure 3-18 Snapshot Succeed

3.4.5 Manual Record

Click the button to start record of current live preview camera. Click the button again to stop manual record.

3.4.6 Stop Live Preview

Click the button to stop live preview in current window.

3.4.7 Right-Click Menu of Live Preview

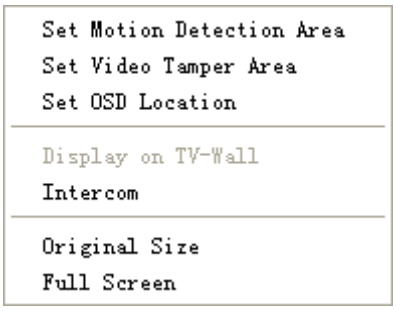


Figure 3-19 Right-click Menu

Click the right mouse button in live view window and Figure 3-19 will pop up. The following list describes the corresponding function.

Name	Description
Set Motion Detection Area	Set motion detection area in current live preview window, See 6.6.2 Modify Alarm Linkage

Set Video Tamper Area	Set tamper area in current live preview window, See 6.2.2 Modify Alarm Linkage
Setup OSD	Set OSD position in current live preview window, See 6.3.2 Modify Camera Information.
Display on TV-Wall	Display current live preview window on TV-Wall on the premise that TV-Wall is connected.
Intercom	Talk to IP camera or device on the premise that audio peripheral is connected such as microphone.
Original Size	Adjust the size of live preview window: original or full live preview area.
Full Screen	Live preview video in Full Screen mode.

3.5 Main Buttons

Area 6 shown in Figure 3-1 is main console control buttons. Operations on them are effective to all live preview windows.

3.5.1 Live Preview Layout

: Click the button to pop up windows layout bar. Different display sets lead to different windows layout;

Windows layout of widescreen:

;

Windows layout of standard screen:

;

3.5.2 Full Screen Mode

: Click the button to enter full screen mode, the button appears after clicked. Click it again to exit full screen mode.

3.5.3 Stop All Cameras' Live Preview

: Click the button to close all playing windows.

3.5.4 Start Emergency Record

: Start emergency record for all cameras and will stop automatically, set the record duration in General Settings interface. See 7.1 System Parameters Configuration for more details. The button appears after clicked and it will restore to original state until the end of record duration.

3.5.5 Enable/Disable Manual Record on All Cameras

: Start Manual Record for all cameras and it will not stop until click the button again. The button appears in record duration.

3.5.6 Start Auto Switch

: Click the button to start auto switch by cameras or groups. Select switch mode by clicking .

Switch by cameras: Start auto switching by cameras according to current live preview layout. Switching duration can be set in 7.1 System Parameters Configuration.

Switch by groups: See 3.3.2 Cycle live preview of group. It has same function as cycle live preview of group.

The button appears in switching duration, click it again to exit.

3.5.7 Enable/Disable Live Audio

: Click the button to enable live audio, the icon will appear ;

: After enable live audio, you can adjust volume through the slider.

3.6 PTZ Control

Click

in Pulling Control Region in main console to unfold

PTZ control panel as shown in Figure 3-20.

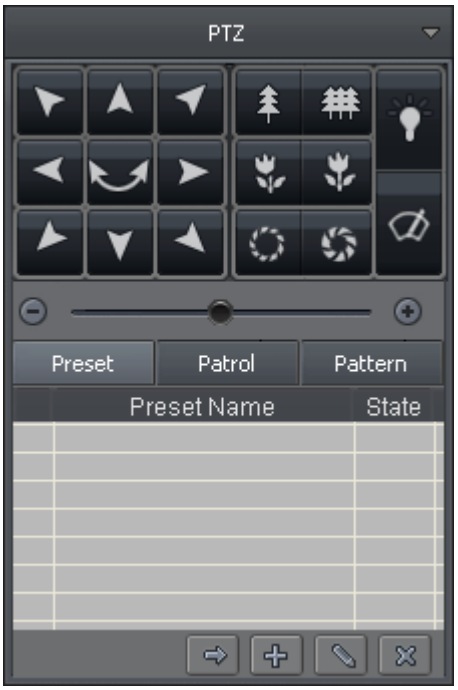


Figure 3-20 PTZ Control Panel

The meaning of icons in PTZ Control Panel is described in following list:

Icon	Description
	Directions control buttons
	Auto tour, appears after started
	Zoom in/out
	Focus in/out
	Enlarge/Narrow Iris
	Light, twinkling between and after opened
	Wiper, twinkling between and after started
	PTZ speed control slider, left slow right fast

In PTZ control area, it supports some advanced operations such as setting presets, patrolling and patterns.

3.6.1 Preset

Users could adjust PTZ to a specific location then save it in preset and rename it. You can call the preset if you want to live preview the location on premise that the camera selected has connected PTZ.

Click “Preset” to enter presets operating area, it has added 4 presets as shown in Figure 3-21.

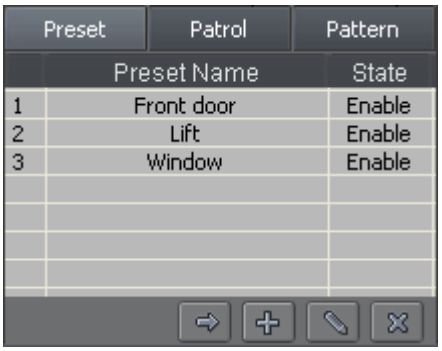


Figure 3-21 Preset Operating Area

(1) Add presets

Click button , a prompt box for adding presets will pop up as shown in Figure 3-22, select number in the drop-down box and input preset name, click “OK” to add preset.

Note: Each preset should have a sole serial number.

Figure 3-22 Add Presets

(2) Modify presets

Click button , a prompt box for modifying presets will pop up as shown in Figure 3-23. The number of presets can not be changed or modified. Click “OK” to save changes after modification.

Note: Each preset should have a sole name.

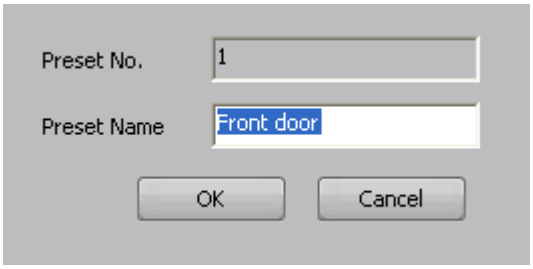


Figure 3-23 Modify Preset Name

(3) Delete presets

Select the preset you want to remove in presets list, click button and a confirmation box as shown in Figure 3-24, click “OK” to delete the preset.

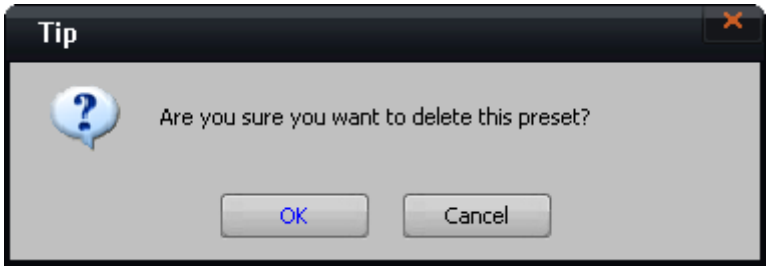


Figure 3-24 Confirm to delete preset

(4) Call presets added

Select the preset you want to call in presets list and click button to call the preset. You can do that by double clicking on the preset number.

(5) Right-click Menu

Click the right mouse button in presets list and the right-click menu will pop up, as shown in Figure 3-25. In addition to above operations, the menu contains forbiddance function. You cannot call a forbidden preset. The status bar will display “Forbidden” after the corresponding preset forbade.

Figure 3-25 Right-click Menu

3.6.2 Patrol

Patrol can make it more convenient to switch between several presets.

Click “Patrol” to enter patrol operating area as shown in Figure 3-26.

Figure 3-26 Patrol operating area

(1) Add patrol sequence

Click button and prompt Config patrol box as shown in Figure 3-27, input patrol name and select presets in the drop-down list which you want to add to the patrol. Then input the dwell time to stay, click “Add” to complete adding preset in the patrol.

Note:

- **Each patrol should have a sole name.**
- **You can remove presets from a patrol by selecting one preset and clicking button “Delete”.**

(2) Modify patrol sequence.

Click button and the patrol configuration dialog will prompt as shown in Figure 3-27. Users could rename a patrol as well add presets to the patrol or delete presets from the patrol by clicking corresponding buttons in patrol configure dialog. Click button “OK” to complete the modification.

Note: You can’t rename the patrol a used name.

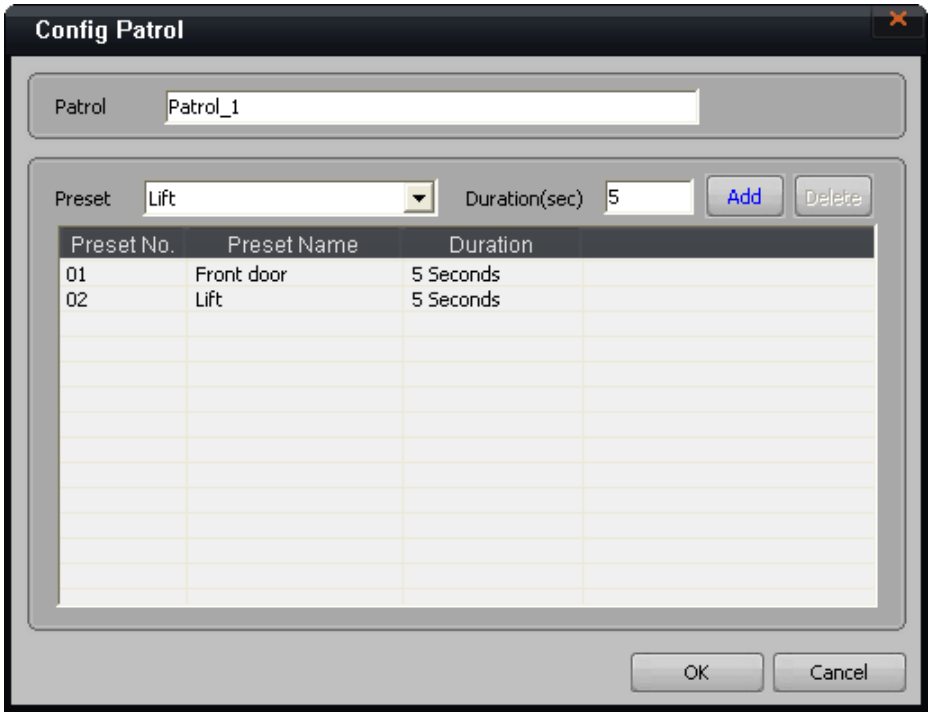


Figure 3-27 Patrol Configuration Dialog

(3) Delete patrol sequence

Select the patrol you want to delete in patrol list and click button , then a confirm box will prompt as shown in Figure 3-28. Click “OK” to delete the patrol.

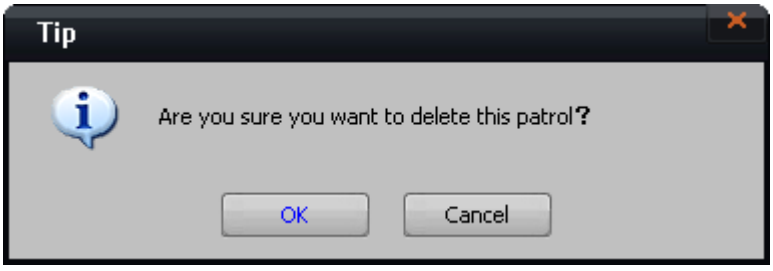


Figure 3-28 Confirm Box

(4) Call patrol sequence

Select the patrol in patrol list and Click button to call it. The button appears in the calling duration and the patrol status bar shows “calling”. Click the button again to exit patrol calling.

(5) Right-click menu

Click right mouse button in patrol list area and the patrol operating right-click menu will prompt as shown in Figure 3-29. The system can achieve functions above by the menu.

Figure 3-29 Right-click Menu

3.6.3 Pattern

Users could record the path of PTZ in patterns. Recorded path can be reviewed by calling the pattern.

Click button “Pattern” to enter pattern operating area. See Figure 3-30.

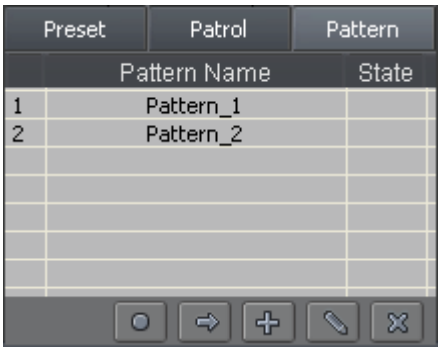


Figure 3-30 Pattern Operating Area

(1) Add pattern

Click button in pattern operating area and a box will prompt as shown in Figure 3-31. Input the name and click “OK” to add a pattern.

Note: Each pattern should have a sole serial number.

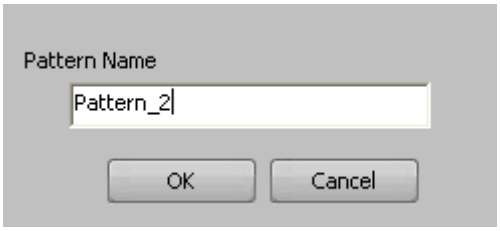


Figure 3-31 Add a Pattern

(2) Modify patter name

Click button , a prompt box for modifying patterns will pop up as shown in Figure 3-32. Click “OK” to save changes after modification.

Note: You can’t rename the pattern a used name.

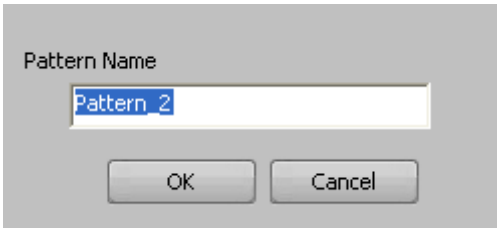


Figure 3-32 Modify Patter Name

(3) Delete pattern

Select the pattern you want to delete in pattern list and click button , then a confirm box will prompt as shown in Figure 3-33. Click “OK” to delete the pattern.

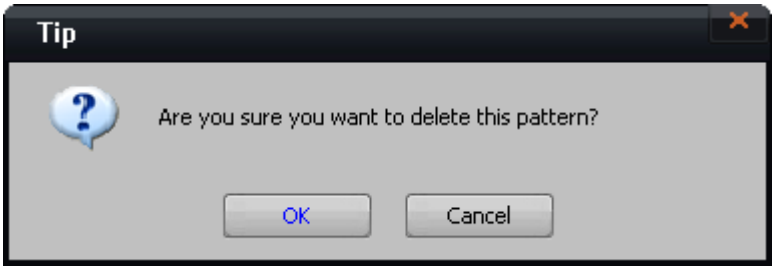


Figure 3-33 Confirm box

(4) Record pattern

Select the pattern you want to record in and click button to start record. The button will appear and the status bar will show “Recording” in recording duration as shown in Figure 3-34. Click the button again to exit pattern recording.

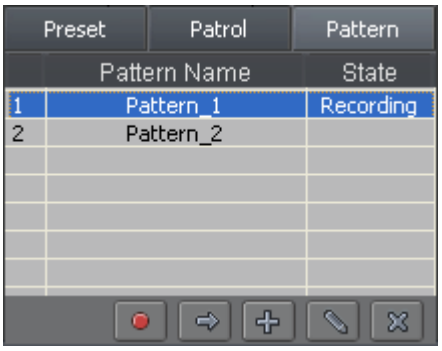


Figure 3-34 Record pattern

(5) Call pattern

Select the pattern you have recorded and click button to call it. The button will appear and the status bar will show “Calling” in calling duration. Click the button again to exit pattern calling.

(6) Right-click menu

Click right mouse button in pattern list area and pattern operating right-click menu will prompt as shown in figure3-35. The system can achieve functions above by the menu.

Figure 3-35 Right-click Menu

3.7 Video Parameters Configuration

Click

in main console to unfold video parameters configuration panel as shown in Figure 3-36.

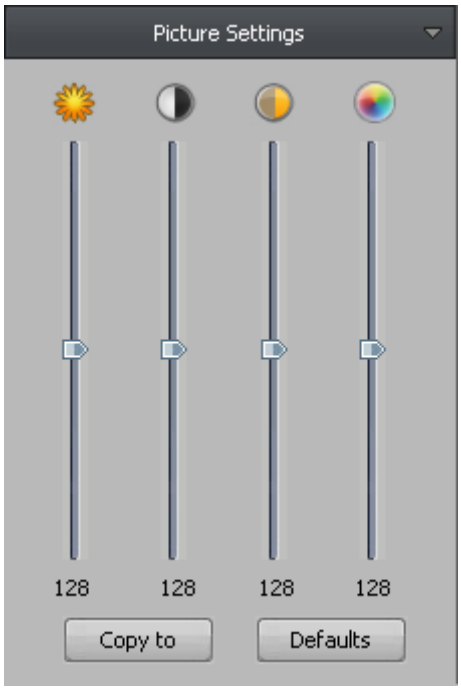


Figure 3-36 Video parameters configuration panel

The following table describes meaning of icons in Figure 3-36:

Icon	Description
	Brightness. Range: 0-255,default value:128
	Contrast. Range: 0-255,default value:128

	Saturation. Range: 0-255,default value:128
	Hue. Range: 0-255,default value:128

Video parameters can be copied from one added camera to another. Click Copy to in the panel and a dialog as shown in Figure 3-37 will prompt. It lists all cameras have been added. Select cameras you want copy to and click “OK” to complete parameters copying.

Accordingly, you can click Default to set video parameters default value 128.

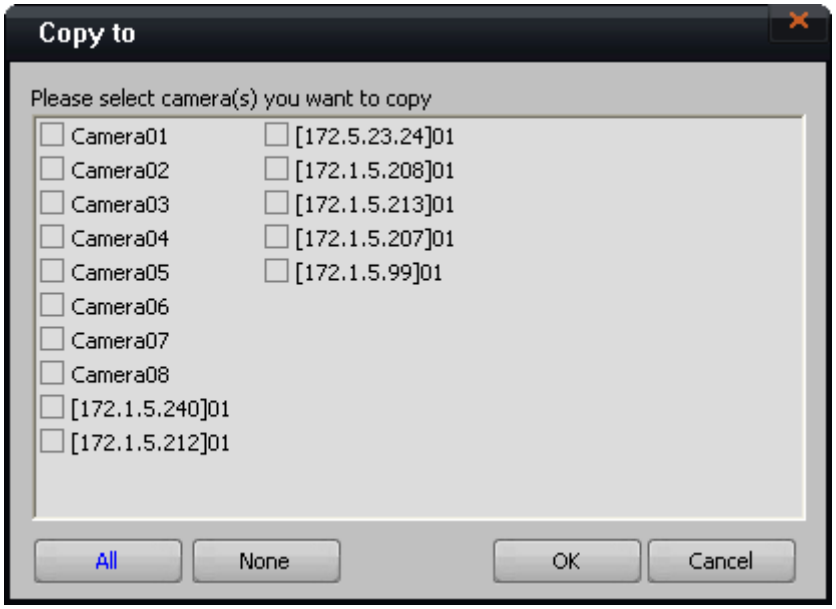


Figure 3-37 Copy dialog

3.8 Alarm out manual control

In actually surveillance application, it probably requires manual controlling alarm out when users perceive suspicious or dangerous situations. Alarm out manual control is designed just for the demand. Click Relay to unfold alarm out manual control panel. As shown in Figure 3-38, several network alarm equipments and alarm boxes have been added.

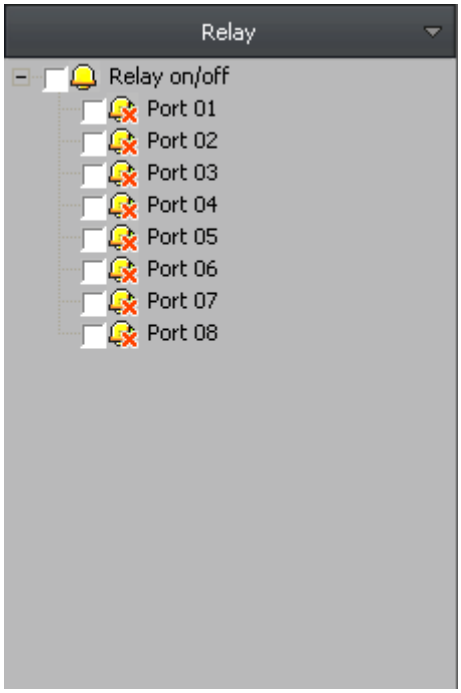


Figure 3-38 Alarm controlling panel

Select the alarm equipment you want to trigger by ticking in the box in front. The alarm icon turns to after triggered. As shown in Figure 3-39, the network alarm (IP: 172.10.77.22, alarm out port: 5) is triggered. Cancel ticking in the box to stop corresponding alarm outputting.

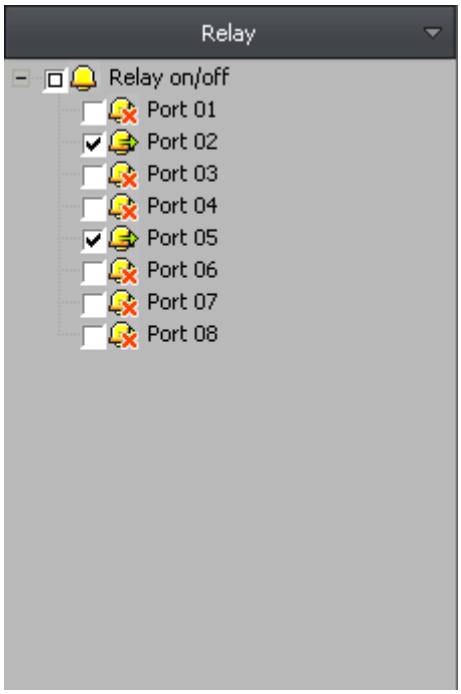


Figure 3-39 Two Alarm Equipments Triggered

3.9 Alarm information bar

When the system receives alarm message, alarm information bar will show red font twinkling with alarm bell. See Figure 3-40.

Figure 3-40 Alarm information bar

Click alarm information bar to unfold it as shown in Figure 3-41. The list enumerates alarm mode, occurrence time, alarm source and recording camera. You can reorder these items by clicking corresponding head column. Click to keep the information bar always visible. Click it again to hide the alarm information bar.

Figure 3-41 Unfolded Alarm Information Bar

Double click on alarm information enumerated to playback corresponding alarm record in single playback window mode. The premise is that users have pre-allocated disks for the system.

3.10 Aux Preview

The item

will be enabled when your PC connects 2 or above displays(Your Graphics card should support double-screen mode). See Figure 3-42.

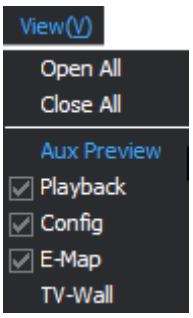


Figure 3-42 Aux Preview

Click item “Aux Preview”, and aux preview interface will appear in view menu, click on the icon and drag it to another monitor, see Figure 3-43. Aux preview window can play added cameras beyond console controlling. Controlling buttons under the aux preview window have corresponding functions as main live preview controlling buttons.

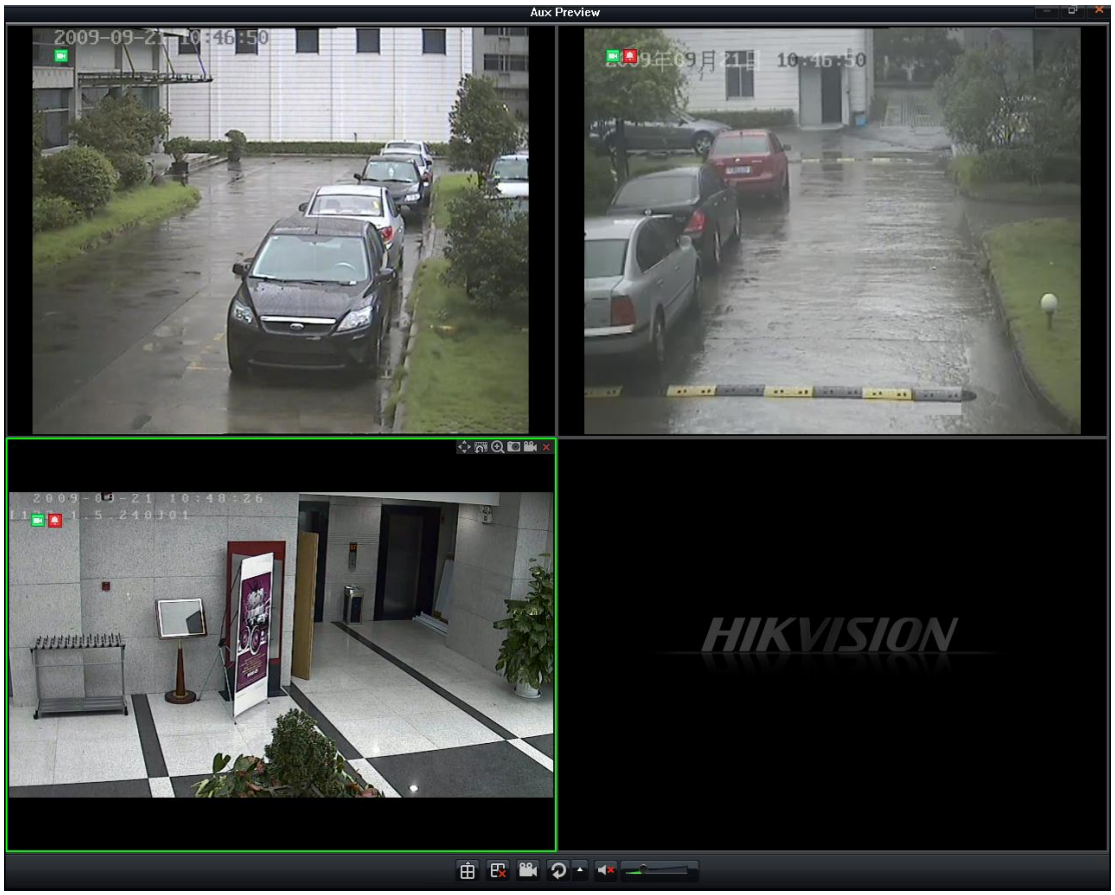


Figure 3-43 Aux preview window

4 Playback

Check View(V) in Playback to enter **[Playback]** interface (Figure 4-1), and click Playback again to close the **[Playback]** interface.

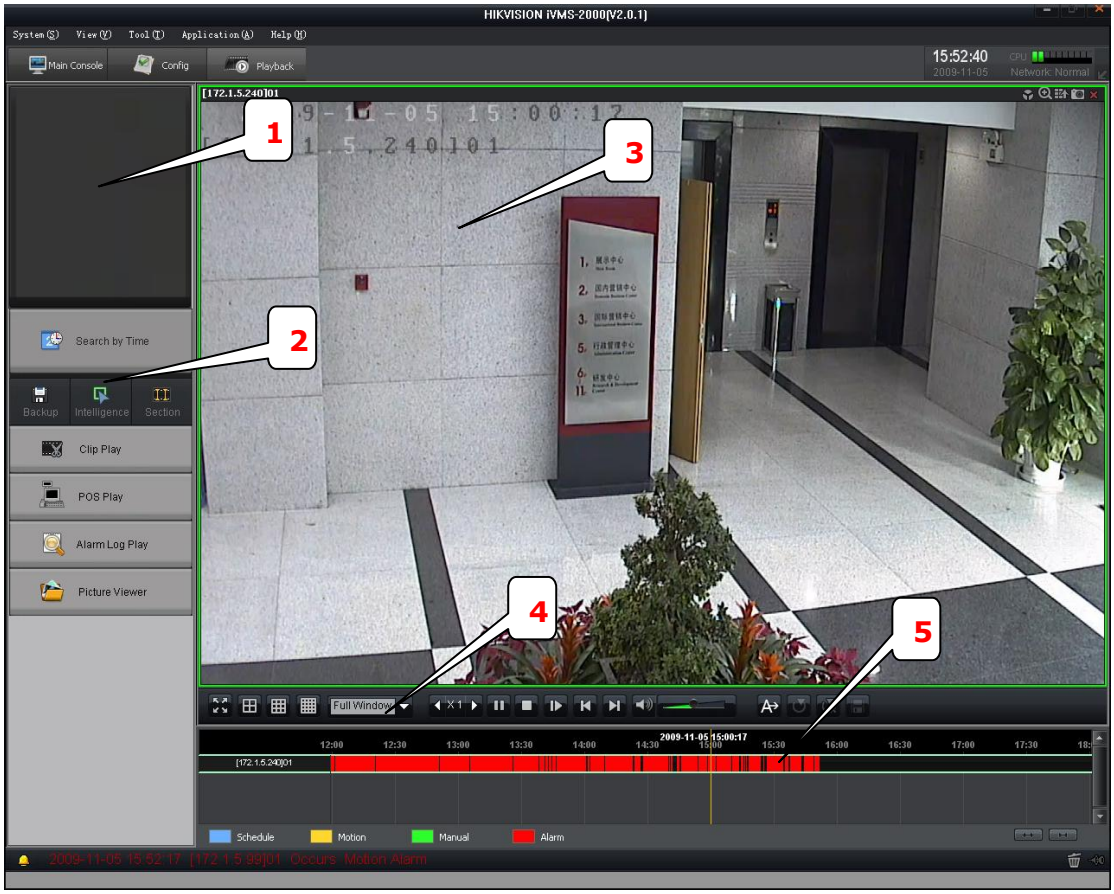


Figure 4-1 Playback Interface

Functions of playback interface:

Label	Name	Description
1	**Call board**	Display the alarm information of the channel by play back time
2	**Buttons area**	Including: Search by Time, Backup, Intelligence, Clip Play, Pos Play, Alarm Log Play, Picture Viewer …
3	**Video display area**	Display area of the record data.
4	**Control area**	Screen split control, View control(original size/full window), Play back speed control, Play, Stop, Step play, Previous Minute, Next Minute, Sound Control, A->B Repeat, Clips…
5	**Playback time bar**	Display the playback data according to the video

type color.

Details of buttons area:

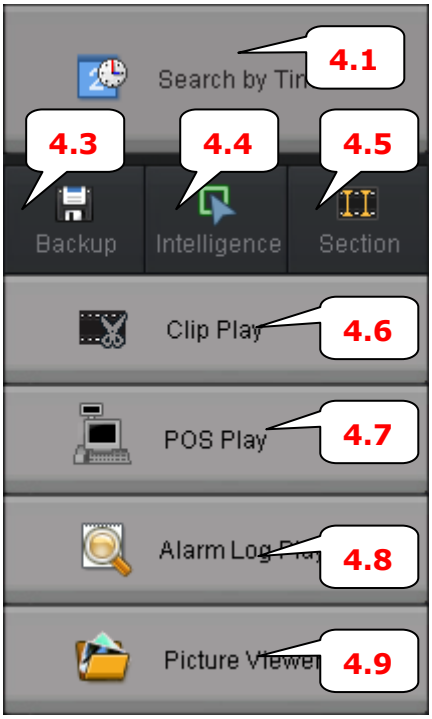
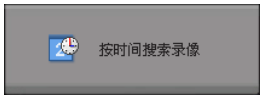


Figure 4-2 Buttons Area

4.1 Search by time

Click 

button to search record by time (Figure 4-3).

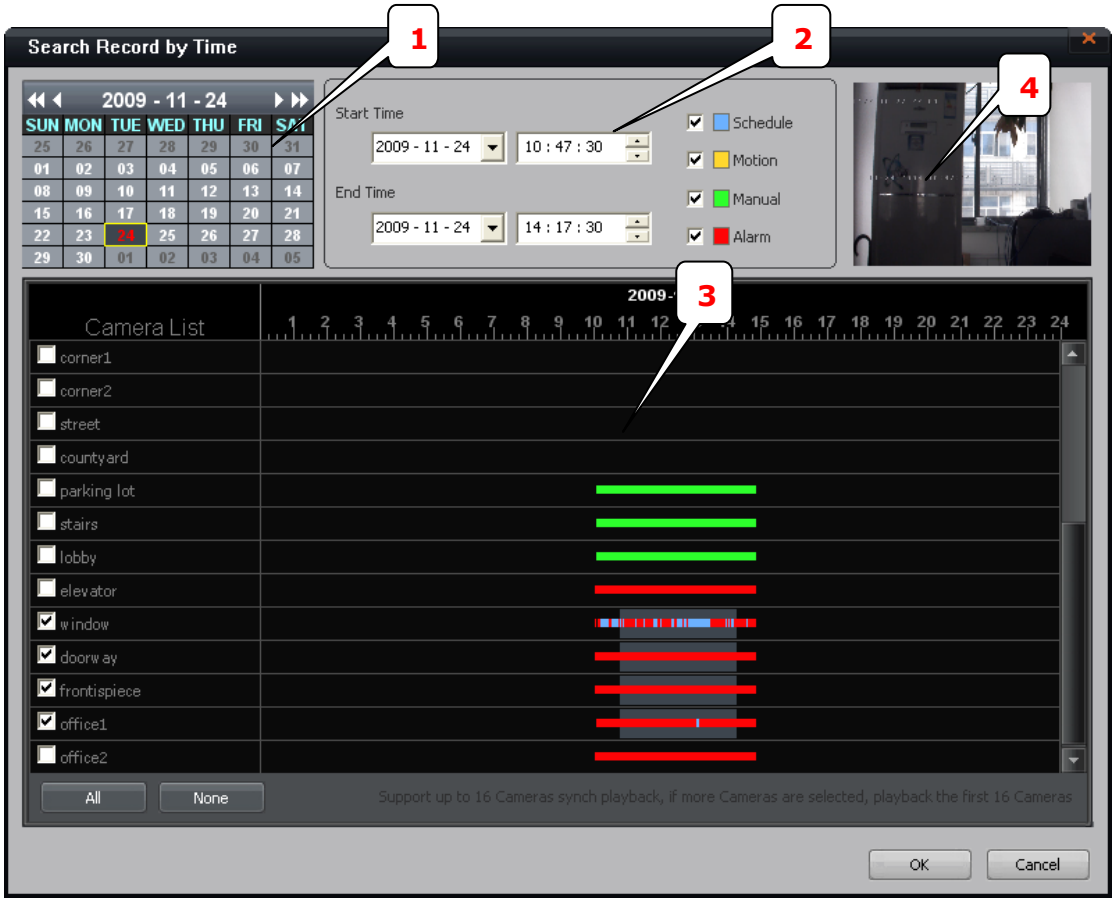


Figure 4-3 Search by time

Functions of Search by time interface:

Label	Name	Description
1	**Calendar Area**	Display the selected date: Click the date, the data will be changed, the current date will be living with a yellow square frame, and the time bar will display the record file in all channels of the select date, The date in the calendar which has record data is colored red.
2	**Time/Type Setting Area**	Setting area of search by time and record type.
3	**Record List**	Display the record data of the selected time in the calendar
4	**Record Preview Window**	Preview the record video to the channel and time which the mouse has clicked on.

Notes:

The selected time in calendar and the date in the time setting area are equal, and it is more directly in the calendar.

The record time list can only display the record data in one day.

The record preview window only displays the current selected record data in the first channel.

Search single-day video data:

1. Set playback time in **[Calendar Area]** / **[Time/Type Setting Area]**
2. Set record type in **[Time/Type Setting Area]** (Selected all default)
3. Select channel in **[Record List]**
4. Click **[OK]** button to playback.

Notes: Set the record time, channel by mouse. Select an area in the [Record List] which has record data by mouse, the start time of the area is the start time of the replay file. The channel included in the area is the selected replay channel. (Can select multiple channels)

Search multi-day video data:

1. Can set two days or more only in **[Time/Type Setting Area]**, the multi-day date in the calendar is colored grey.

2. Set record type in **[Time/Type Setting Area]**. (Selected all default)
3. Select channel in **[Record List]**.
4. Click **[ok]** button to playback.

4.2 Synchronous Playback

The record data selected in **[Search by time]** interface will be synchronous played in the main interface. (Figure 4-4)

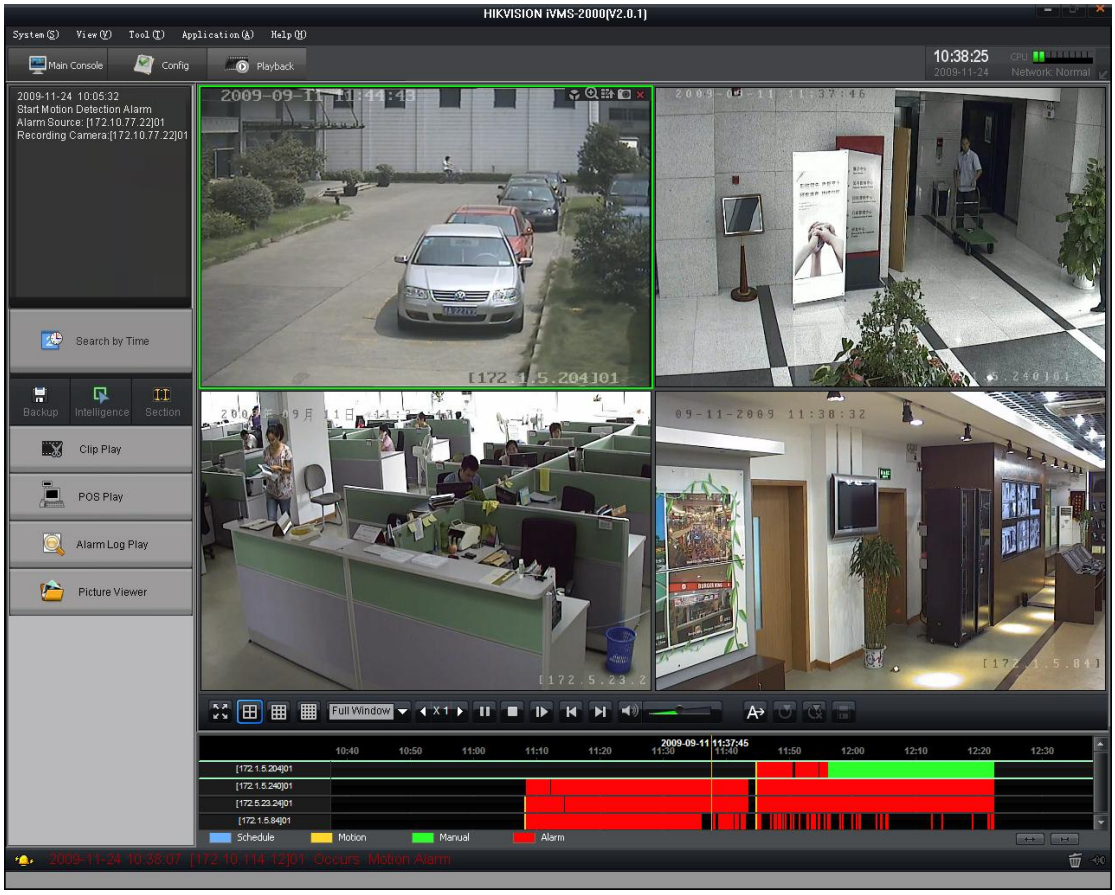


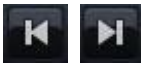
Figure 4-4 Synchronous Playback

The playback data can be controlled by using the playback control bar during the playing time.

Playback Control Bar:

Buttons in Playback Control Bar:

Icon	Description
	Click button can hide the toolbar on the left, the playback button area and the time bar. It will let the playback window area to get the maximum area shown. Click again to recover.
	Split screen in widescreen mode, 4,9,16 split.

	Split screen in non-widescreen mode, 4,9,16 split
	Change the display mode. Select "Original Size" to get a non-distortion show. Select "Full Screen" to get a full screen show. The mode can be changed at any time during the playing period.
	Speed Control: 1/8, 1/4, 1/2, 1, 2, 4, 8x
	Play / Pause
	Stop
	Single frame play
	Previous Minute / Next Minute
	Audio Switch and Sound Control.
	A->B Repeat Button, during the playback process, drag the time bar to the start position you want to repeat and click A, then the button will change to B. Drag the time bar to the end position and click B.
	Start repeat A->B
	Stop repeat A->B
	Save A->B data

4.2.1 Playback Clips

Click the **[clip]** button to enter the clip interface. (Figure 4-5)

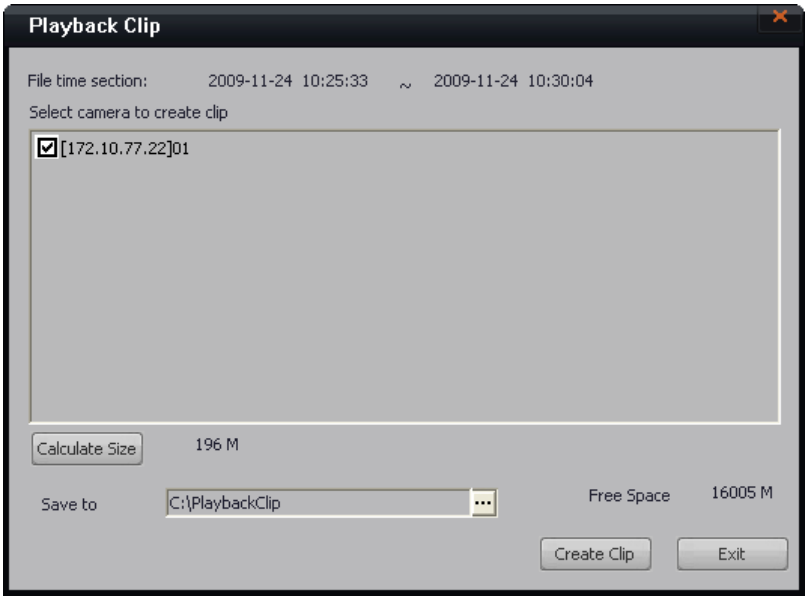


Figure 4-5 Playback Clips Interface

Select the channel which will be clipped in the playback dialog. (Can set different path) Click **[Create Clip]** to clip. Click **[Calculate Size]** to view the size the clip data before creating clip.

If the video data is larger than the remaining disk space. It will pop-up a tip. You have to change a disk which has enough space.

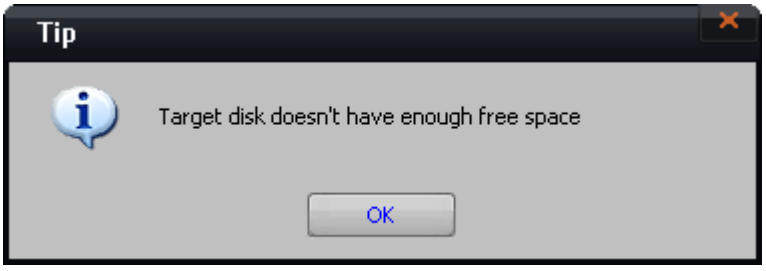


Figure 4-6 No enough space

Note: The software default copies the clip player to the clip path that user specify, to make user view easily.

4.2.2 Playback Window Control Bar

Playback control bar at the top of the screen, Channel names displayed on the left, Video Parameter, Digital Zoom, Playback on TV-Wall, Capture, Close the playback channel on the left. (Figure 4-7)

Figure 4-7 Playback Windows

Buttons in the playback window bar:

Icon	Name	Description
	Video Parameter	Change the video parameter, including Brightness, Contrast, Saturation, Hue, and can copy the configuration to all channels or recover to default value. (Figure 4-13)
	Digital Zoom	The same as the digital zoom function of the preview window in the console platform.
	Playback on TV-Wall	Output the image of the playback window in the TV-Wall
	Capture	Capture in current playback window. It will pop-up a dialog which have the path (set in the system parameter) and status (Success or Fail) information. Click the dialog can view the capture image.
	Close Channel	Close the playback window.

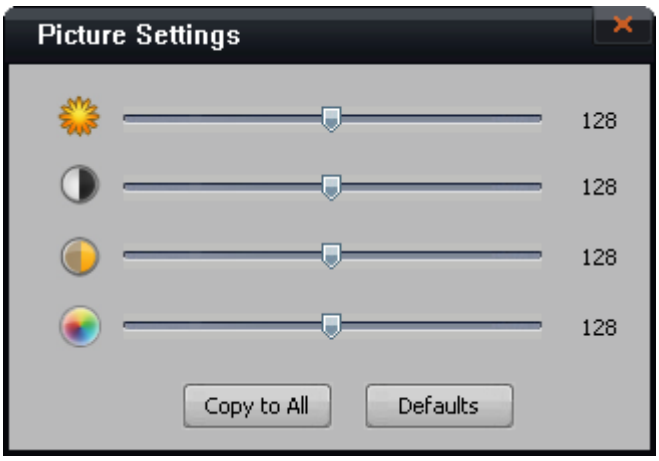


Figure 4-8 Video Parameter

4.2.3 Playback Time Bar

The position which the yellow vertical line points to is the current play time.

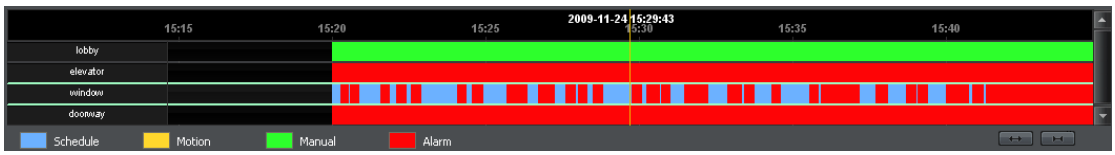


Figure 4-9 Playback Time Bar Interface

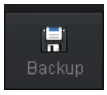
Dynamically displays the mouse position of the representative of the time when the mouse moves on the time bar. All the channels will turn to the time the mouse pointed to and play the record data after click the mouse.

Time adjustment of the lower right button: ,

: Zoom in time precision. Let the time range small to show more accurate time. The minimum range is 30 minutes

: Zoom out time precision. View the multi-day record video. The maximum range is 3 days.

4.3 Backup

Click the **[Backup]** button 

in the **[Button area]** after searching by time to enter the backup interface. (Figure 4-10)

The default selected time and channel are the same as the synchronous playback time and channel. Can reset the time, select channel, record type, the operation is the same as search by time. User can also view the channel record by mouse.

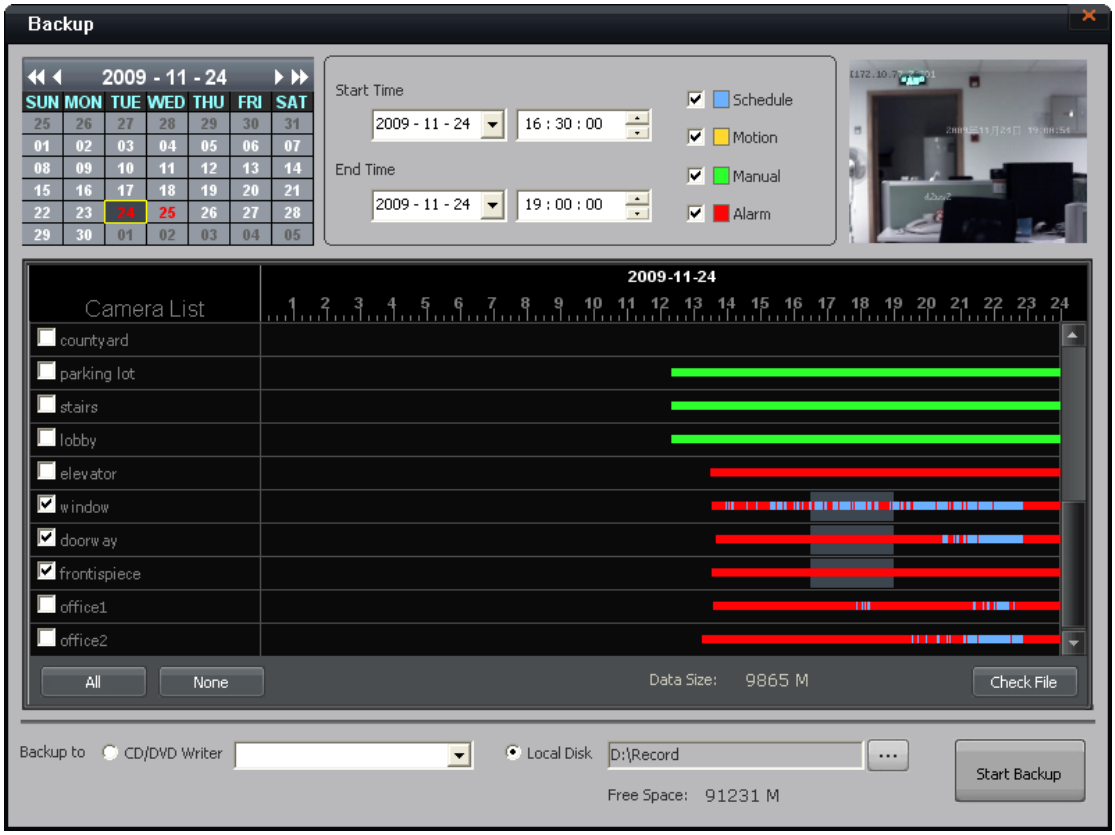


Figure 4-10 Backup Interface

It will have a real-time display the size of the selected record data under the time bar when backup the data. Click

button can preview the name and size. (Figure 4-11)

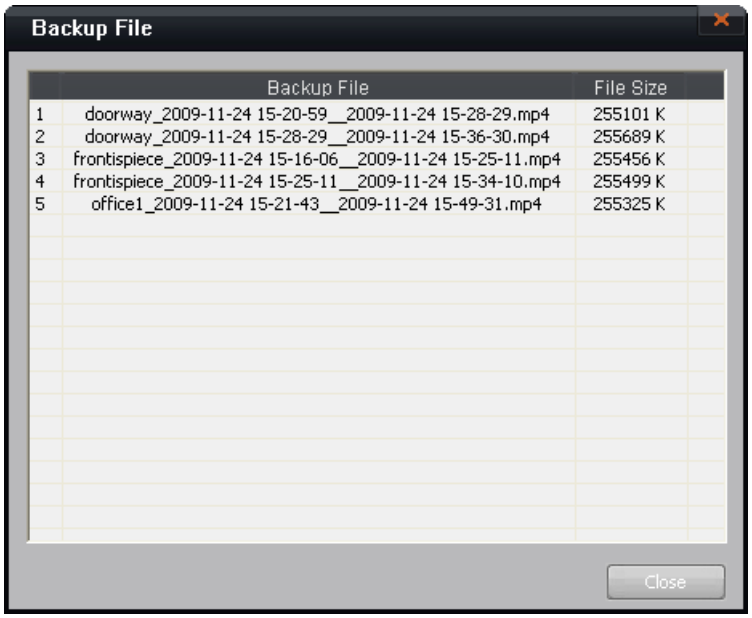


Figure 4-11 View Backup file Interface

Backup method can select the local disk, or a CD/DVD Writer.

Local Backup:

1. Select **[Local Disk]** radio button:

2. Click to set the local backup path. (Figure 4-12).The disk and the free space are shown in Figure 4-13.

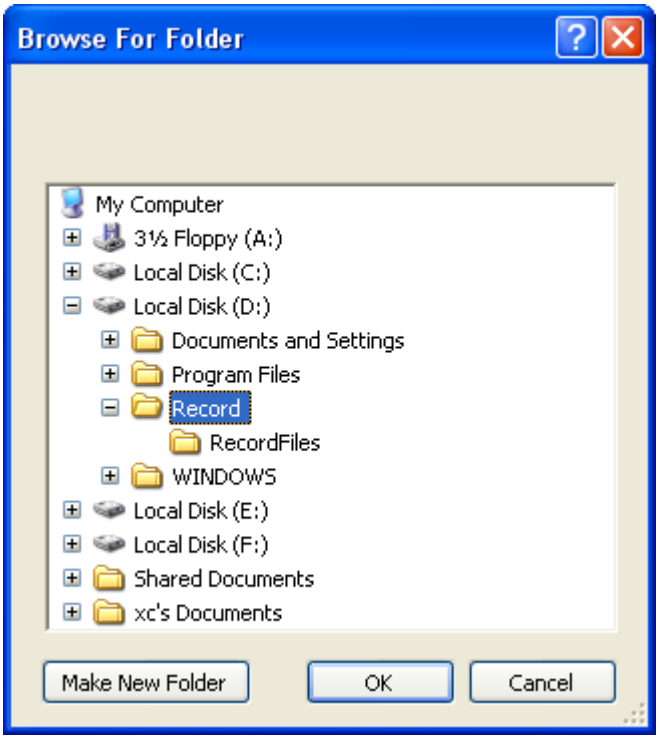


Figure 4-12 Select local backup path

Figure 4-13 Local backup path and free space

3. Click

to start the backup. The backup process is shown below the backup interface.

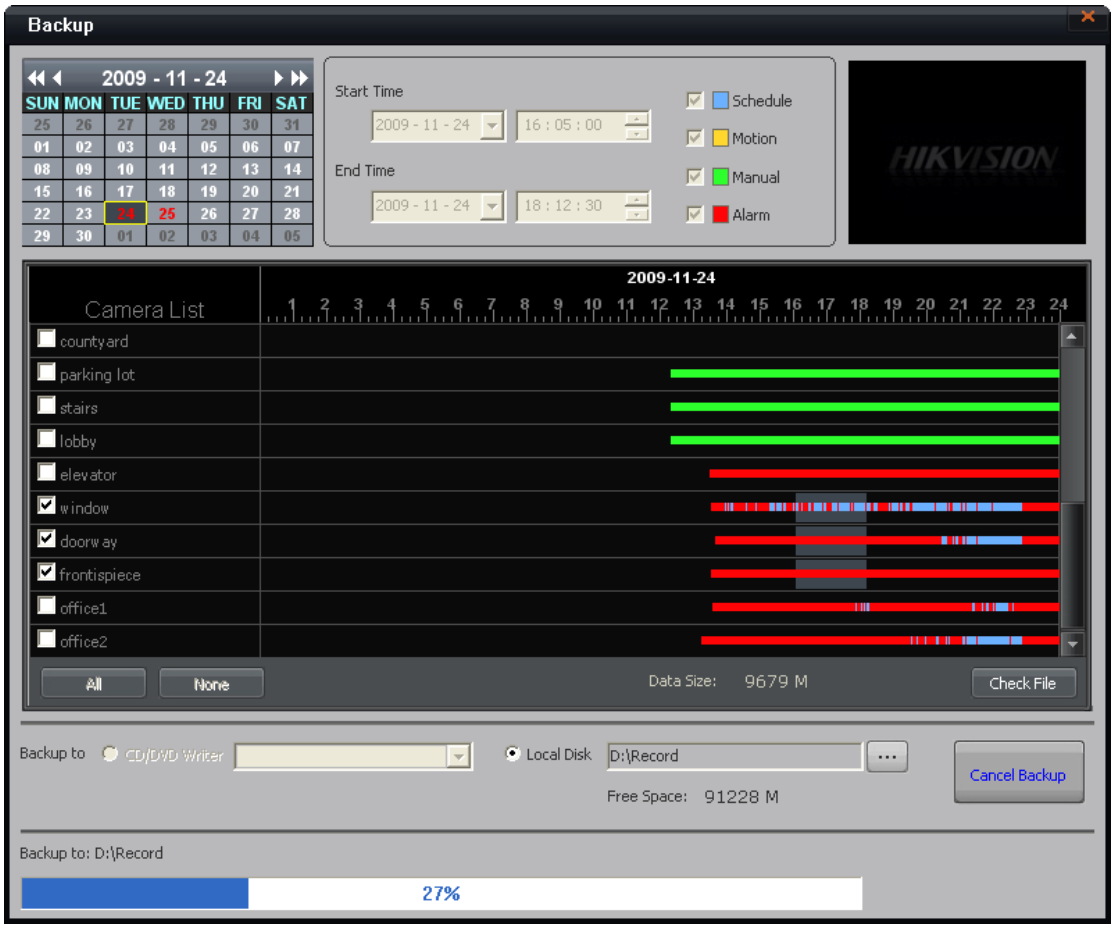


Figure 4-14 Backup

4. Finish, pop-up the tip. (Figure 4-15)

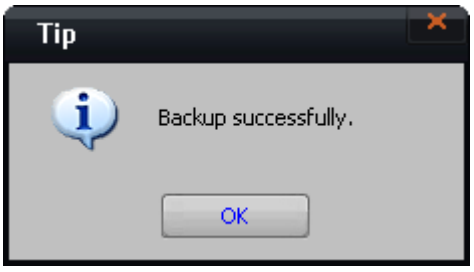
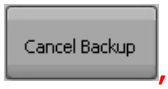


Figure4-15 Backup completed Tips

Note: After clicking the

button, the button will change to this 

, click again can cancel the current backup operation. It will pop-up tips to ensure before cancel the backup operation. (Figure 4-16)

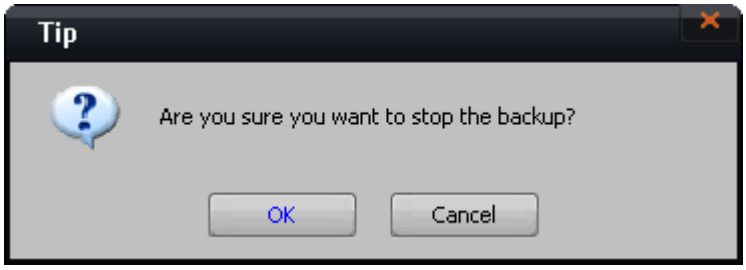


Figure 4-16 Cancel backup tips

CD/DVD Writer:

1. Select **[CD/DVD Writer]** radio button;

2. Select drive in the combo box and set the disk name, current date default. (Figure 4-17)

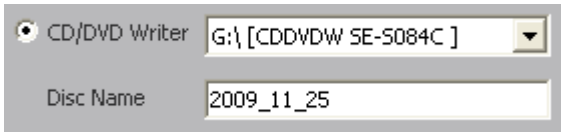


Figure 4-17 Select drive and set the disk name

Note: It can pop-up a tip if the CD/DVD Writer device is not connected. At this time, the [CD/DVD Writer] radio button can't be used. (Figure 4-18)

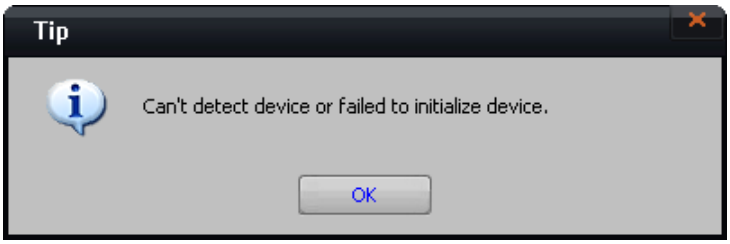


Figure 4-18 Tips: Can't detect device.

3. Click

to start burning. It shows the burning process below the backup interface. (Figure 4-19)

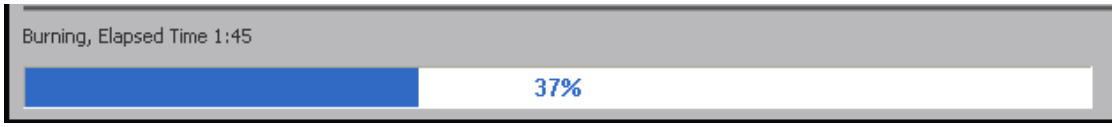
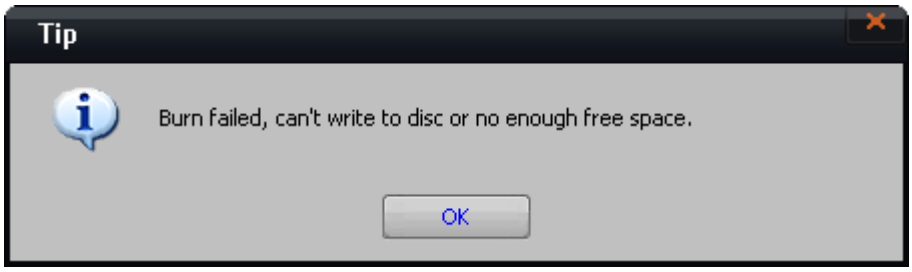


Figure 4-19 Burning

Note: It is different from the local backup that there will be several stages first:

Ready to data, Initializing CD/DVD drive, Building the file. In these progresses, when the system detects the CD/DVD Rom can't be written or the size of the data to burn is larger than disc capacity. It will pop-up a dialog box and terminates the operation. (Figure 4-20)



4-20 Tips: CD/DVD Rom Error

4. Finish burning, pop up the tip. (Figure 4-21)

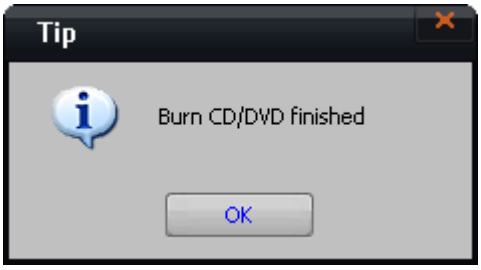
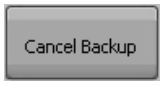


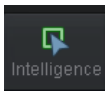
Figure 4-21 Tips: Finish burning!

Note: User can cancel the burning operation by clicking the 

button. But the interrupt disc burning operations may result in unrecoverable damage to the data. So try not to carry out this operation.

4.4 Intelligent Playback

Intelligent Playback sets motion detect area to the data and quickly analyses the motion detect. It will display the time of the detected motion detect in the search result list. User can navigate to this point for playback after search out the results.

Click 

in the Button Area to enter the intelligent playback interface after Search by time (Figure 4-22)

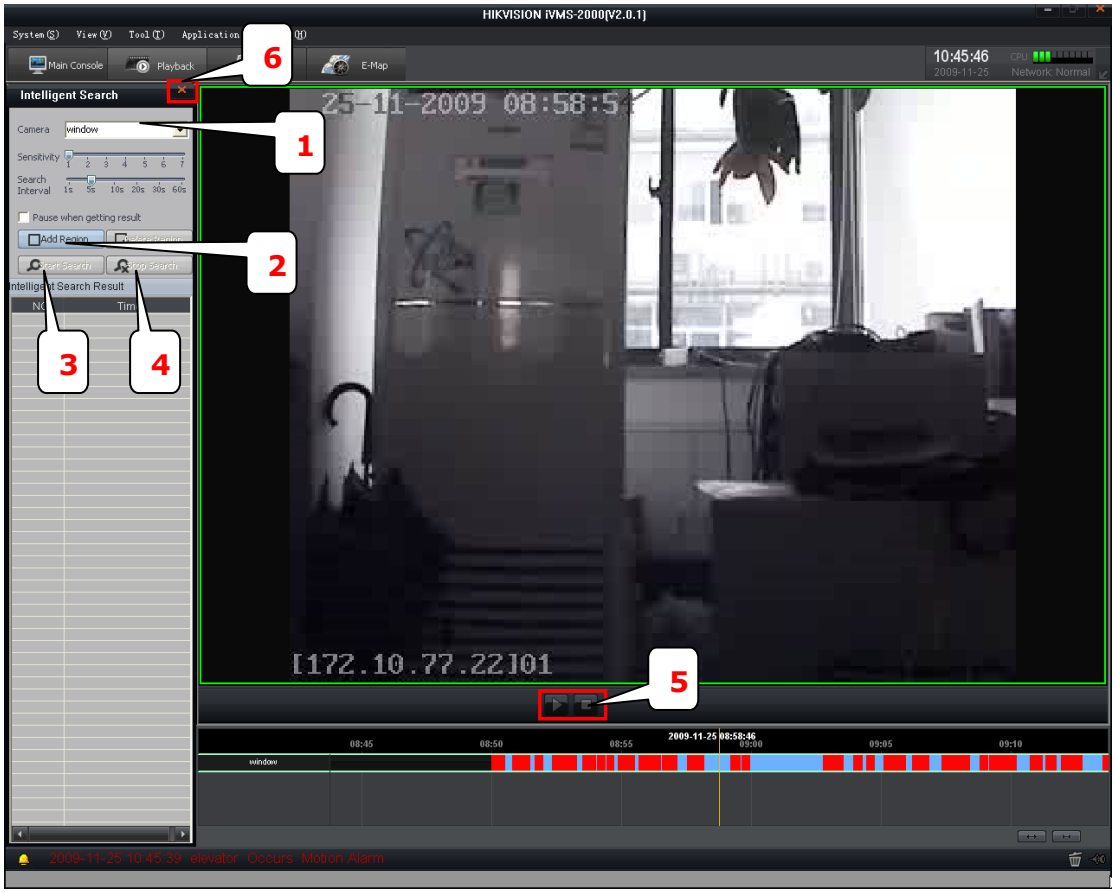


Figure 4-22 Intelligent Playback Interface

Steps:

1. Select channel in the **[Camera]** combo box (the channel being synchronizing). It will display the image of this channel in the right preview area.

2. Click

button, dragging the mouse to add detection region in right preview area (Up to 4 regions). (Figure 4-23)

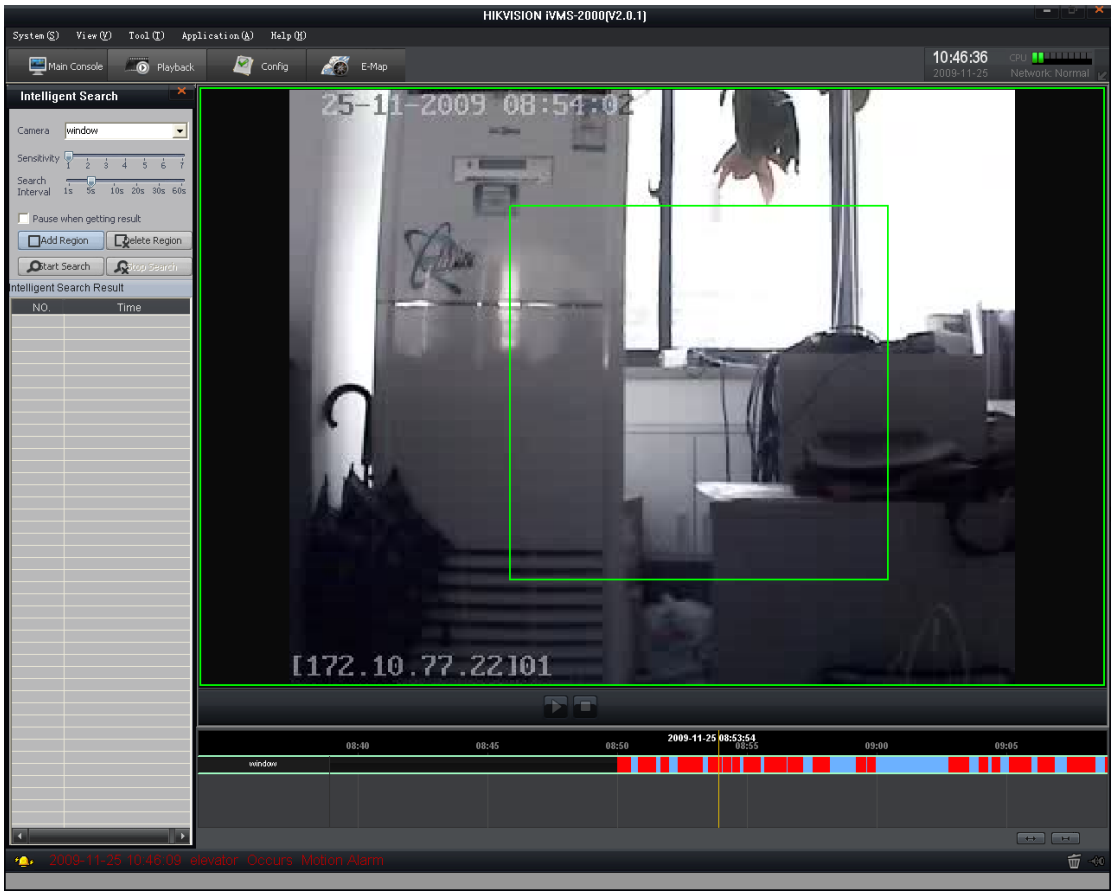


Figure 4-23 Add Region

Note: Select the area which has been added and click **to delete.**

3. Click to get a quickly motion detect analysis of the record data. The result will be added in the intelligent search result by order. (Figure 4-24)

Intelligent Search Result

NO.	Time
15	2009-11-25 08:56:48
14	2009-11-25 08:56:43
13	2009-11-25 08:56:23
12	2009-11-25 08:56:17
11	2009-11-25 08:56:12
10	2009-11-25 08:56:07
9	2009-11-25 08:56:02
8	2009-11-25 08:55:55
7	2009-11-25 08:55:50
6	2009-11-25 08:55:22
5	2009-11-25 08:55:17
4	2009-11-25 08:55:12
3	2009-11-25 08:55:02
2	2009-11-25 08:54:35
1	2009-11-25 08:54:12

Figure 4-24 Intelligent Search Result

4. Click

to stop searching. (Automatic stop after finishing searching all the motion detect in this time.)

5. Double click a record in **[Intelligent Search Result]** can navigate to the time movement detection record to playback. Control the record by **[Pause]** button and **[Stop]** button in the playback process

6. Click **[Close]** to exit intelligent playback.

Notes: Intelligent playback options set

Sensitivity: Sensitivity of detection to choose, 7 levels in total, 1 is the most sensitive, 7 is the most insensitive.

Search Interval: The shortest time interval of the 2 motion detection.

Pause when getting result: Check this radio button, it will pause searching when search out the motion detect record, and can get a real-time view to the record.

4.5 Section Playback

Section Playback: In accordance with set starting and ending time, average the single-channel record to 4/9/16 sections by the record time. Then playback one channel record data by the segment at the same time.

Click **[Section]**

in the **[Button Area]** to enter the section playback interface. (Figure 4-25)

Figure 4-25 Section Playback Interface

Steps:

1. Select channel in the **[Camera]** combo box (the channel being synchronizing);

2. Set the start time and the end time, and select the number of sections (4/9/16).

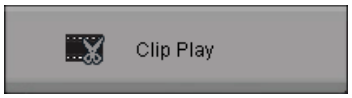
3. Click **[Play]** button to start section playback. The section information is displayed in the left **[Section Info]**. Split screen automatically adjust according to the number of sections.

4. The function of the control bar button is the same as the synchronous playback, can control the section playback.

5. Click **[Close]** to exit Section Playback.

Note: Section playback is non-synchronous play mode. When operate the time bar by clicking the mouse left button, the control works only to the section that the mouse operates. When select a playback window, it can display the selected status of the section and display the current play time in the time bar.

4.6 Clips Playback

Click **[Clps Play]** 

in the **[Button Area]** to open the clips player. (Figure 4-26)

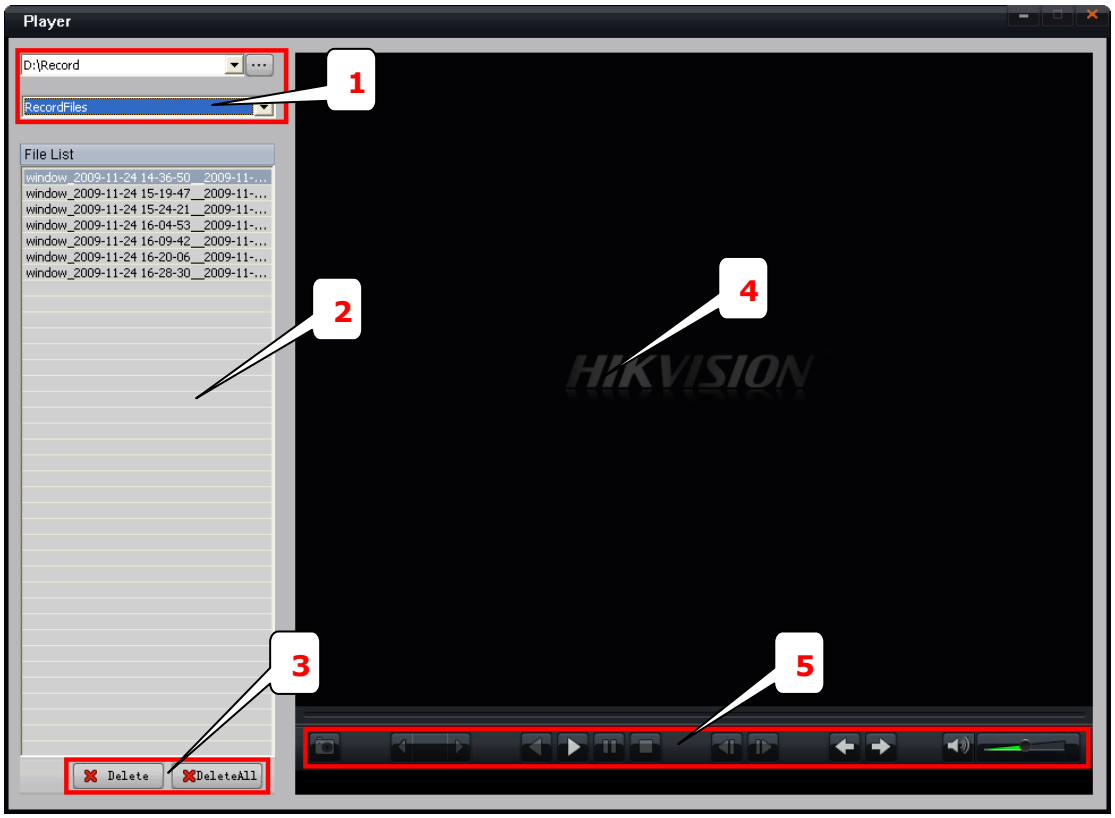


Figure 4-26 Clips Player

Functions of the Clips Player:

Number	Name	Description
1	**Path Selected Area**	Select the path of the clip file
2	**File list**	List all the clip files in this folder
3	**Delete File**	Delete/Delete All
4	**Screen Display Area**	Display area of the clip file.
5	**Play Control Bar**	Play control operations.

Button functions in the Play Control Bar:

Icon	Description
	Capture. Create a folder named Picture in the program directory by default, and save the capture file in this folder.
	Playback button.
	Play button
	Pause button
	Stop button
	Previous frame / Next frame button. Can play the record file by frame.
	Speed Control: 1/8, 1/4, 1/2, 1, 2, 4, 8x
	Previous file/ Next file in the file list
	Sound control

Short cut key:

Key	Control
Double Click	Full Window/Exit Full Window
Esc	Exit the full window play mode
Space	Play/Pause(apply to playback mode)
Up/Down	Play previous/ next file
Left/Right	Play previous/next frame

4.7 POS Play

Pos Play: Search for POS machine transaction information, and trade POS machines for playback of the linkage channel record. Transaction information can be added to the playback image display. (See the <POS settings> for details)

Click **[POS Play]**

in the **[Button Area]** to enter the POS Play interface. (Figure 4-27)

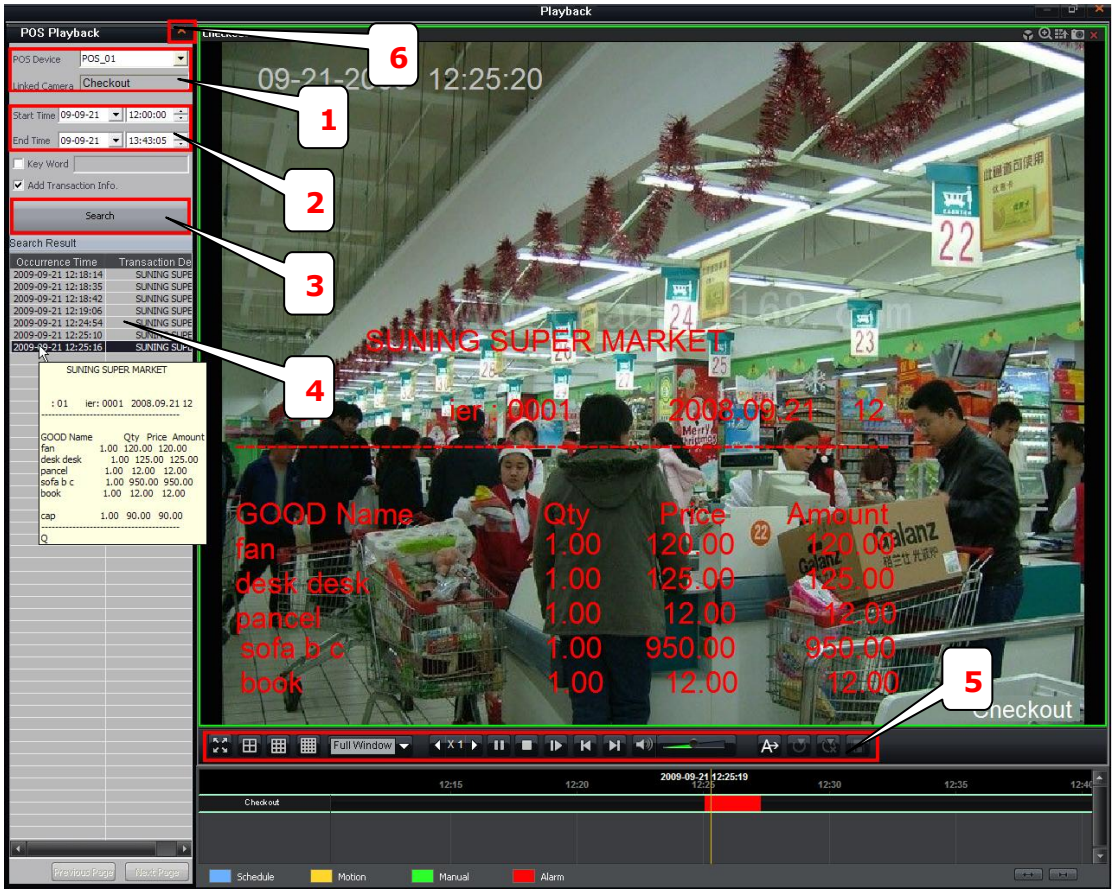


Figure 4-27 POS Play Interface

Steps:

1. Select a POS machine in the **[POS Device]** combo box. The channel which is associated with the POS machine is displayed in the **[Linked Camera]** automatically.

2. Set the start time and end time of the POS Play.

3. Click **[Search]** to start the POS machine transaction information search. The result will be listed in **[Search Result]**.

4. Select the transaction information, and double click to see the record data which is corresponding to this transaction information.

5. The function of the control bar button is the same as the synchronous playback, can control the POS Play.

6. Click **[Close]** to exit POS Play.

Notes:

Double click a play, and it will display the POS transaction information for 6 hours after the start of the data. If you do not want to look this, click a play in the result list to play other POS transaction data.

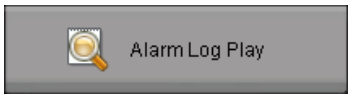
Can set the search keywords when set the POS search criteria, check the [Keywords] option at the top of [search] button, and input the keyword in the edit box. Then it will only search the transactions which contain the keyword information.

Can choose whether add the POS machine transaction information to the record video or not, through the check/uncheck radio button [Add Transaction Info] to achieve.

Can pop-up a tip that displays the detail transaction information in the mouse position when the mouse moves to one transaction information in [Transaction Info] list. It is the same as the information which are added to the record video.

4.8 Alarm Log Play

Alarm Log Play: Select channel and time, set the alarm type, look up the record video by the alarm log.

Click **[Alarm Log Play]** 

in **[Button Area]** to enter the alarm log play interface.

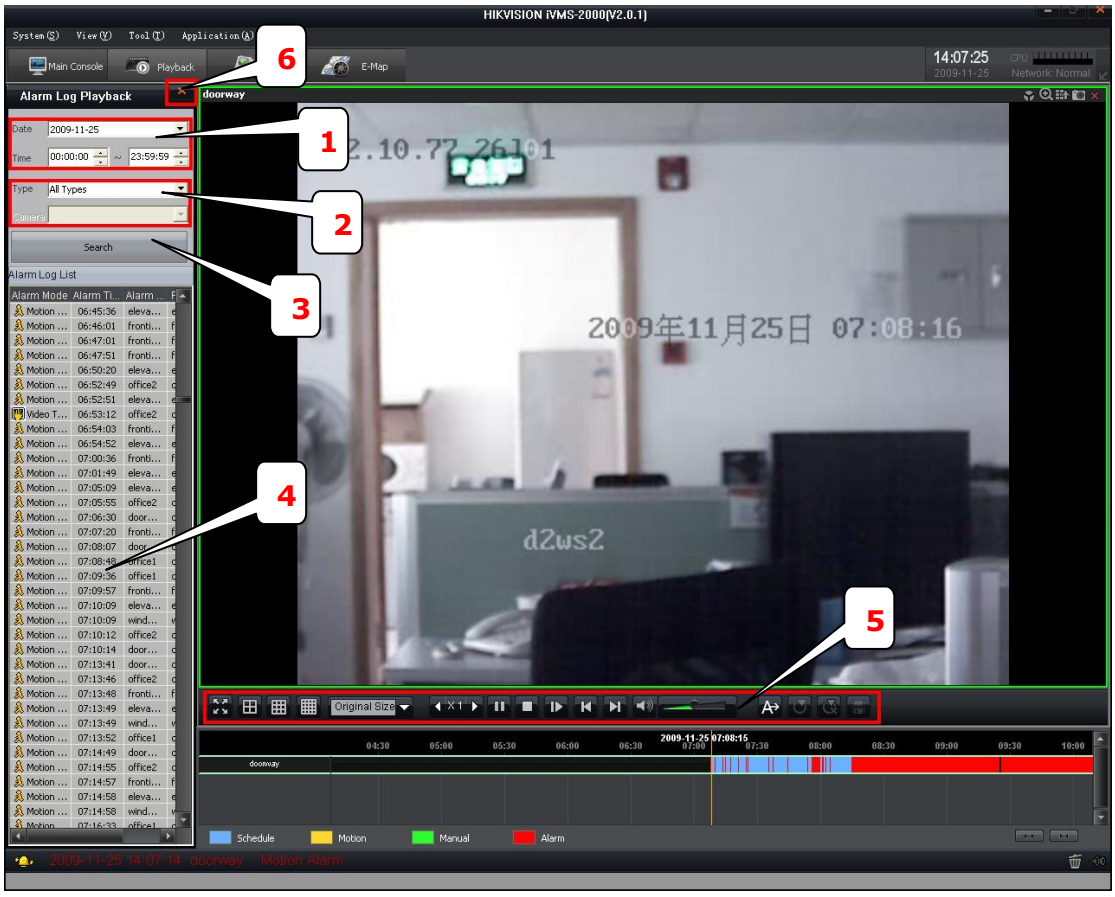


Figure 4-28 Alarm Log Play Interface

Steps:

1. Set the start time and end time of the alarm log.

2. Set alarm type and channel which is associated with the alarm.

3. Click **[Search]** to start alarm log search, the result will be displayed in the **[Alarm Log List]**.

4. Select one alarm log, and double click the log to see the recording data of this alarm log. (Or right click and select **[Play]**)

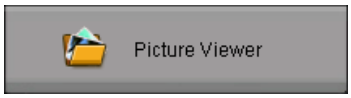
5. The function of the control bar button is the same as the synchronous playback, can control the Alarm Log Play.

6. Click **[Close]** to exit Alarm Log Play.

Note: It can display the related information of the alarm log by pop-up tips in [Alarm Log List] when the mouse move to an alarm log.

4.9 Picture View

Picture Viewer: It is a tool which is used to view the capture picture in preview and playback process, and edit it.

Click 

in the **[Button Area]** to open the Picture Viewer or open it by clicking Picture Viewer in the Tool(T) menu. (Figure 4-29)

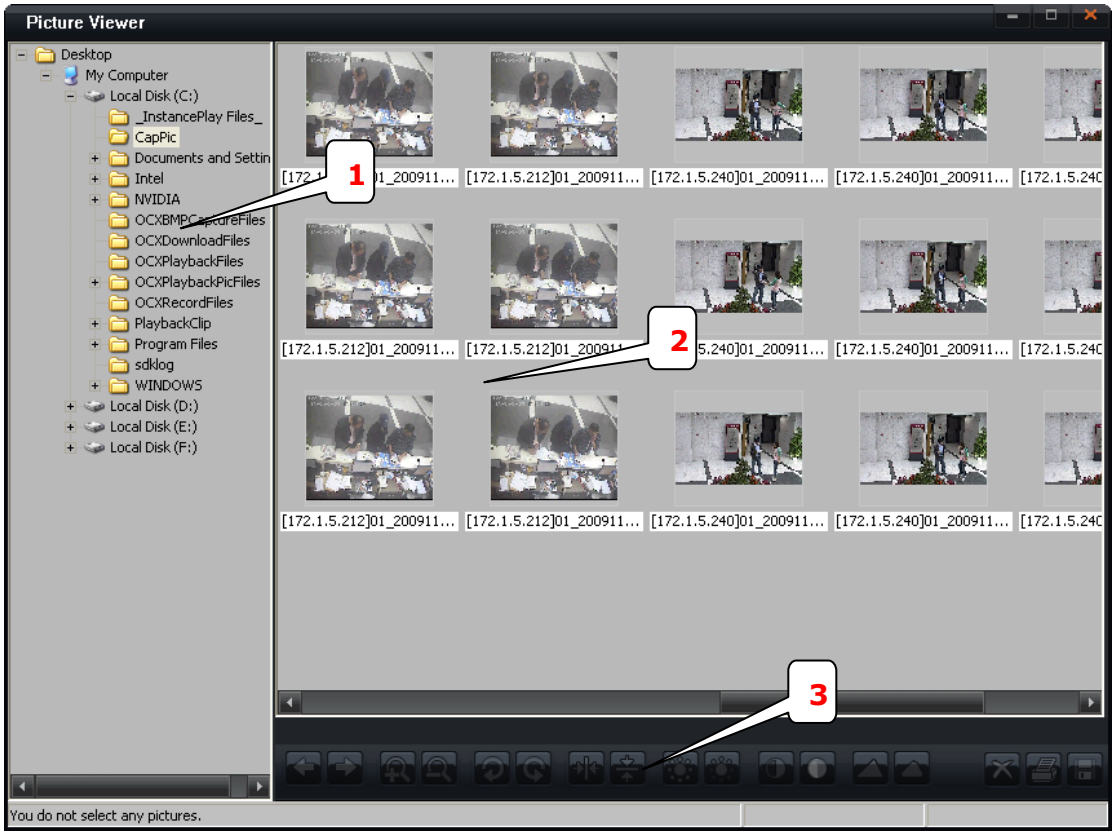


Figure 4-29 Picture Viewer Interface

Functions of the Picture Viewer:

Number	Name	Description
1	**Directory tree**	List the file folders.
2	**Picture View Area**	List the pictures in the selected folder.
3	**Picture Edit Area**	Operate the picture.

Double click in the Picture View Area to select other view modes. Right click on a picture to delete, print and save it.

Double click a picture or right click to select the **[zoom]** label, can enter the zoom mode. At the same time, the Picture Edit Area below is at the available state.

Button Functions:

Icon	Description
	Previous/Next picture
	Zoom in/Zoom out, (do not change the original size)
	Clockwise/Counterclockwise
	Mirror/Flip
	Lighten/Darken, this operation is not reversible
	More Contrast/Less Contrast, this operation is not reversible
	Sharpen/Soften, this operation is not reversible
	Delete, delete the picture directly
	Print, must connect to a printer
	Save the modified picture as…

Click the Previous/Next, Zoom in/Zoom out, or double click the picture in any editing operation process, the picture will restore the default.

5 E-Map

Click to check the **[E-map]** menu option E-Map in the **[View]** View(V) menu bar to enter the E-map interface. Click again to exit. (Figure 5-1)

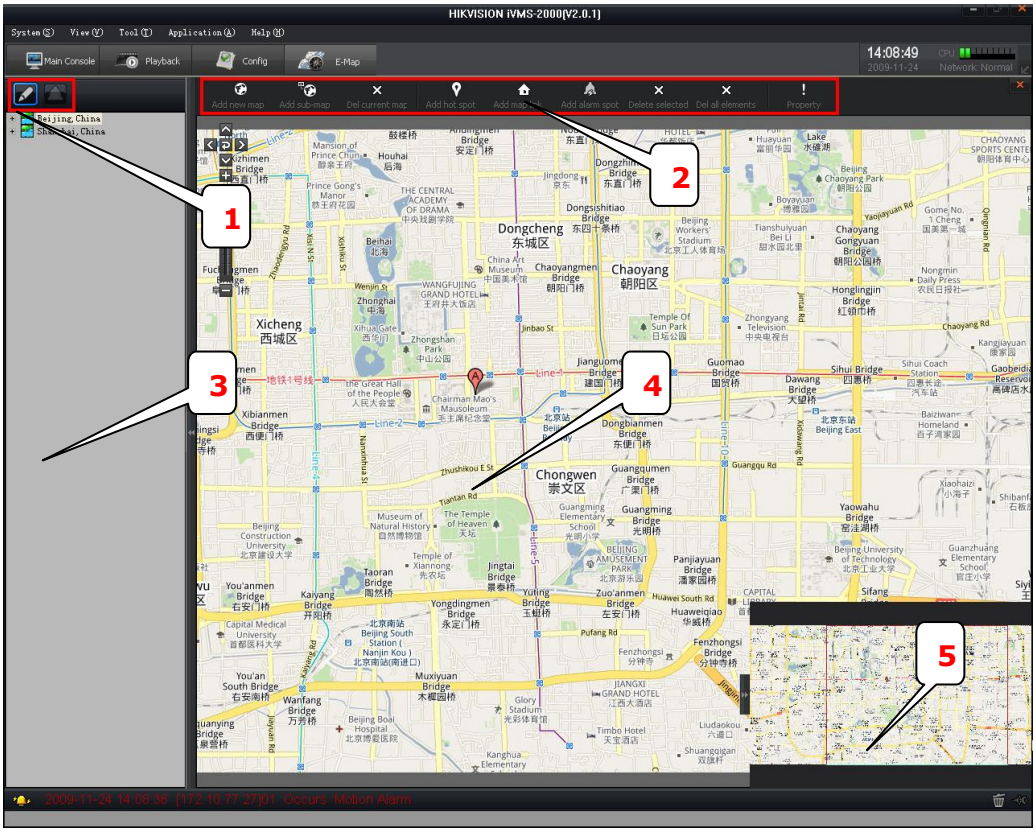


Figure 5-1 E-Map Interface

Functions of the playback interface:

Number	Name	Description
1	**Map Operation Bar**	Switch Edit / non-editing state, cancel all the alarms
2	**Map Edit Bar**	Edit map and the element in the map
3	**Tree Structure Area**	Show all the maps and the element in the map.
4	**Map Preview Area**	Show maps.
5	**Eagle Eye View Area**	Show map preview area in the whole region of the map(Can hide this)

Note: The E-map interface can be dragged to other display devices, the operation is the same as the auxiliary preview.

5.1 E-Map Operations

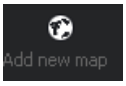
Click **[Edit]** button to start edit (Figure 5-2) or exit edit (Figure 5-3).

Figure 5-2Edit State

Figure 5-3 Non-editing State

5.1.1 Map Operation

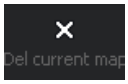
(1)Add Map

Click the **[Add new map]** button 

in the Edit State Bar to pop-up tips. (Figure 5-4) Input the name of the map; Click to select the path where the map exists. (.bmp or .jpg format); Click **[OK]** to add.

Figure 5-4 Map

(2) Delete Map

Click the **[Del current map]** 

button in edit state to pop-up tips. (Figure 5-5) Click [OK] to delete current map or click **[Cancel]** to cancel the operation.

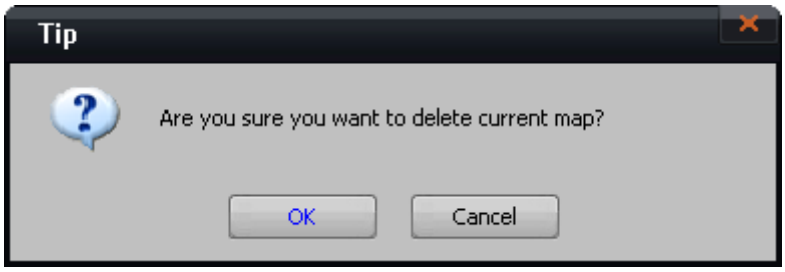
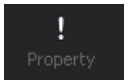


Figure 5-5 Tips: Delete map

(3) Modify Map

Click the [Property] button 

to pop-up tips. (Figure 5-6). Change the name of the map in the **[Name]** bar. Click to re-select a map; Click **[OK]** button to add the map or click **[Cancel]** to cancel the modify operation.

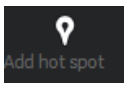
Note: [Add sub-map] operation is the same as the [Add new map] operation. The difference is that the sub-map must be added on the map which has already been added. (Figure 5-6)

Figure 5-6 Sub map

5.1.2 Hot Spot Operation

Hot spot: A region on the map associated with the channel.

(1)Add hot spot

Click the **[Add hot spot]** button 

in edit state to pop-up tips. (Figure 5-7) Input the name of hop spot in the **[Name]** bar. Select associated channel in **[Associate]** camera list. Click **[OK]** to add the hot spot.

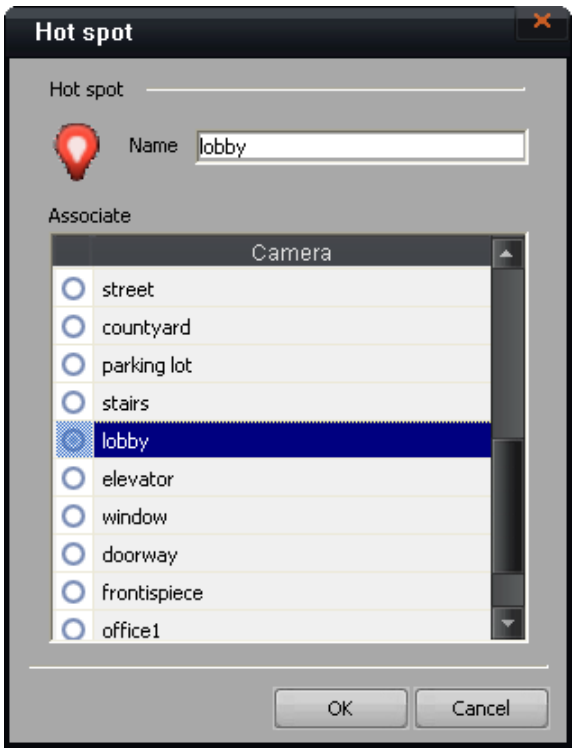


Figure 5-7 Hot spot

(1)Delete hot spot

Select a hop spot in the Map Preview Area in edit state. Click **[Delete selected]**

to pop-up tips. (Figure 5-8) Click **[OK]** to delete the hot spot or click **[Cancel]** to cancel the delete operation.

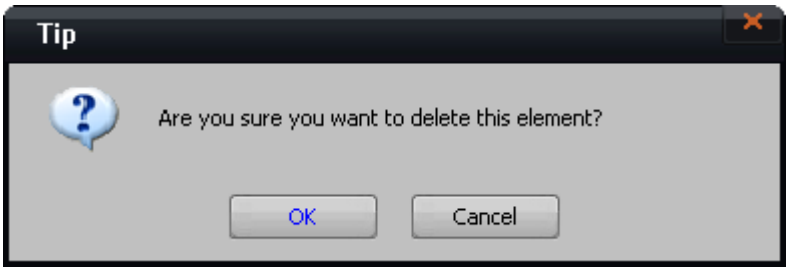


Figure 5-8 Tips: Delete hot spot

(2)Modify hot spot

Right click on the hot spot in edit state to pop-up the right button menu

.

Click **[Property]** to pop-up tips Figure 5-7. Change the name of the hot spot in the **[Name]** bar. Re-select the associated channel in **[Associate]** camera list. Click **[OK]** to modify the hot spot or click **[Cancel]** to cancel the modify operation.

Notes:

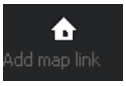
Double click the added hot spot in Map Preview Area in non-editing state, it will

pop-up tips that displays the associated channel to this hot spot.
The hot spot icon will be lighted when there is an alarm in the associated hot spot after the linkage alarm configuration is finished. (See 6.6.1 Add Alarm Linkage for detail)

5.1.3 Add map link operation

Map Link: Shortcuts to link to other maps (include non –subclass map).

(1)Add map link

Click the **[Add map link]** button 

in edit state to pop-up tips. (Figure 5-9) Input the name of map link in **[Name]** bar. Select the associated map in **[Associate]** map list. Click **[OK]** to add map link.

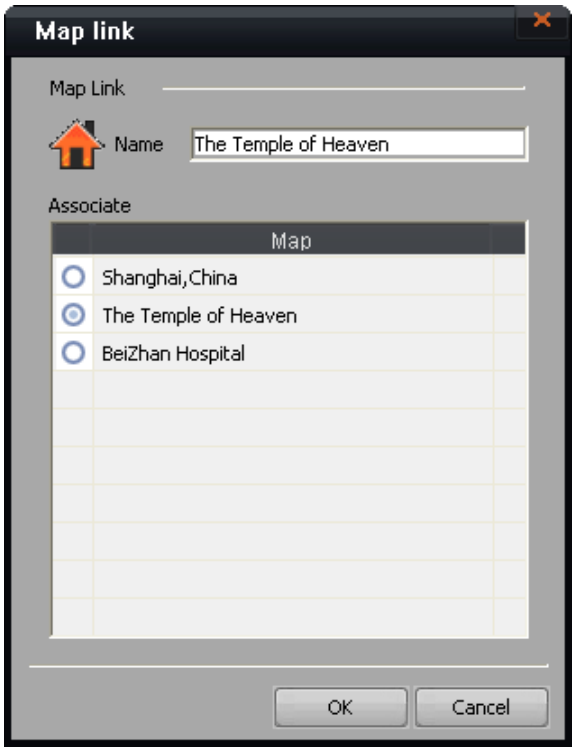
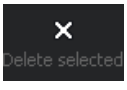


Figure 5-9 Map Link

(1)Delete map link

Select a link in Map Preview Area in edit state. Click **[Delete selected]** 

to pop-up tips. (Figure 5.9) Click **[OK]** to delete the map link or click **[Cancel]** to cancel delete operation.

(1)Modify map link

Right click on the map link in edit state to pop-up the right button menu

.

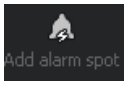
Click **[Property]** to pop-up tips Figure 5-9. Change the name of the map link in the **[Name]** bar. Re-select the associated map in **[Associate]** camera list. Click **[OK]** to modify the map link or click **[Cancel]** to cancel the modify operation.

Note: Double click the added map link in Map Preview Area in non-editing state can directly turn to the associated map of the map link.

5.1.4 Alarm spot operation

Alarm spot: The associated alarm input of an area in the map. (Such as: Audio sensors, Infrared sensors.)

(1)Add alarm spot

Click the **[Add alarm spot]** button 

in edit state to pop-up tips. (Figure 5-10) Input the name of hop spot in the **[Name]** bar and select the associated alarm input port in [Associate] port list (See 6.7.3 Alarm box and alarm in/out configuration for detail). Click **[OK]** to add the alarm spot.

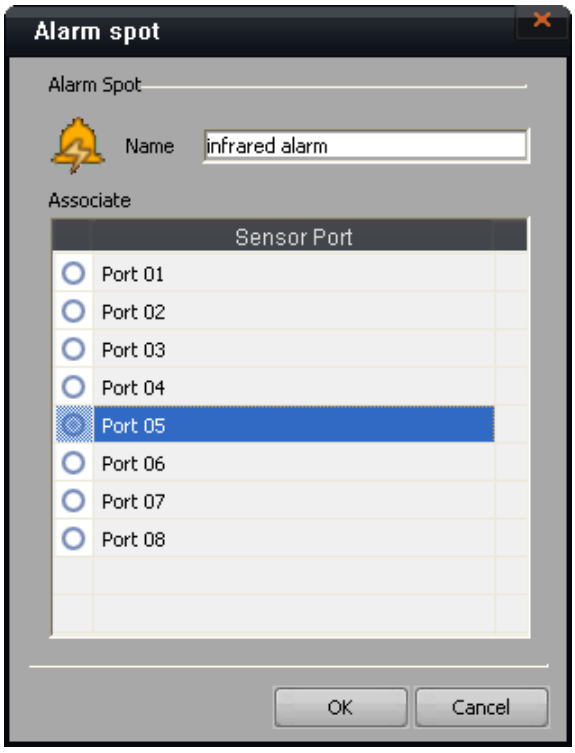
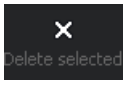


Figure 5-10 Add alarm spot

(1)Delete alarm spot

Select an alarm spot in Map Preview Area in edit state. Click **[Delete selected]** 

to pop-up tips. (Figure 5.9) Click **[OK]** to delete the alarm spot or click

[Cancel] to cancel delete operation.

(1) Modify alarm spot

Right click on the alarm spot in edit state to pop-up the right button menu

. Click **[Property]** to pop-up tips Figure 5-10. Change the name of the alarm spot in the **[Name]** bar. Re-select the associated alarm input port in **[Associate]** port list. Click **[OK]** to modify the alarm spot or click **[Cancel]** to cancel the modify operation.

Note: The alarm spot icon will be lighted when there is an alarm input in the associated alarm input spot after the linkage alarm configuration is finished. (See 6.7.3 Alarm box and alarm in/out configuration for detail)

5.1.5 Map preview operation

(1)Drag the map

If the map display area can't display the whole map, you can drag the map in the preview area.

(1)Zoom in/out and move

Click to move up, to move left, to move right, to move down, returns to actual size. Click or drag the slider up can zoom in the map, or drag the slider down to zoom out the map. (Figure 5-11)

Figure 5-11 Map preview operation

(1) Eagle Eye View Area

Click to hide and to show. Drag the rectangle area in the window to partly enlarge it. The map in rectangle area is displayed in the Map Preview Area.

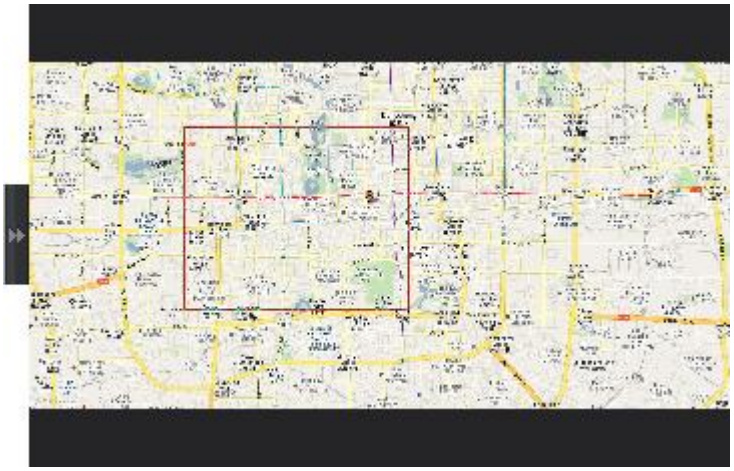


Figure 5-12 Eagle Eye View

6 Configuration

Click [Config] Config in [View] View(V) menu to enter configuration interface (Figure 6-1), and click [Config] Config again to close the configuration interface.

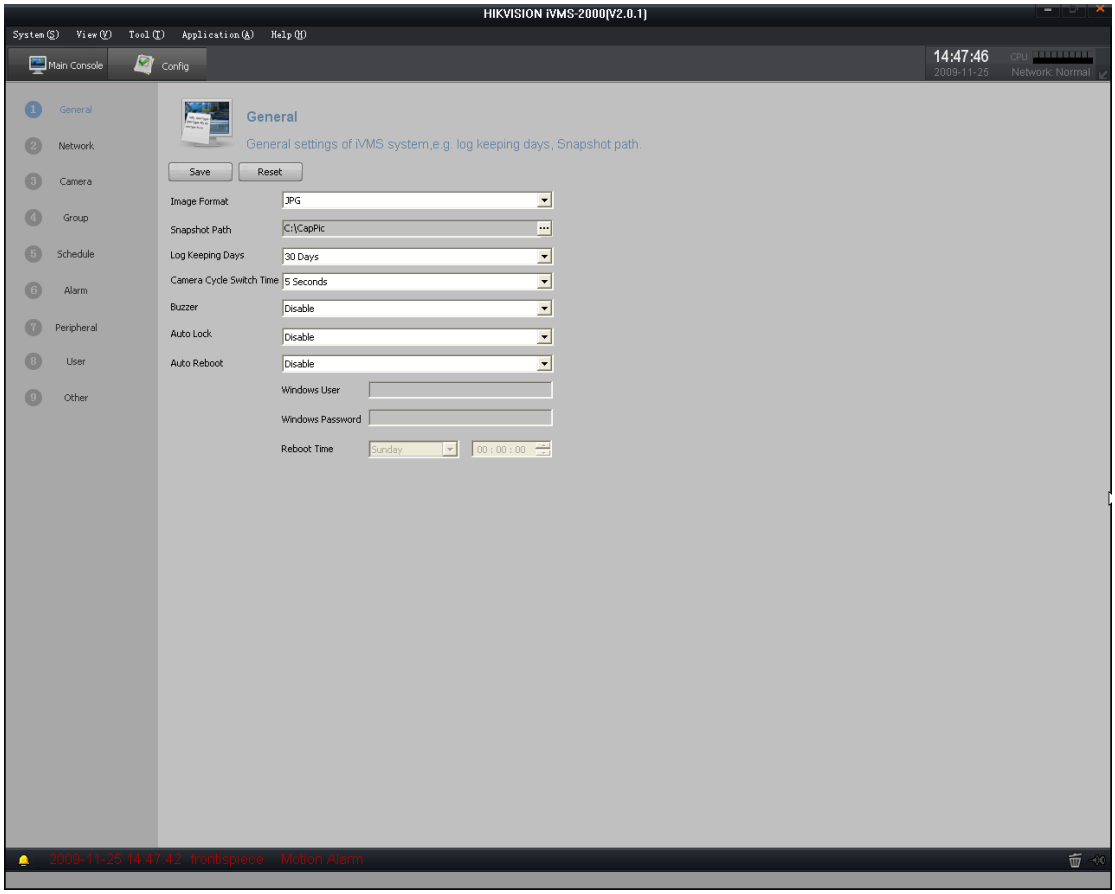


Figure 6-1 Configuration Interface

Note: The configuration interface can be dragged to other VGA displays as "Aux View".

6.1 General Settings

Click [General] to enter the general settings interface (Figure 6-2).

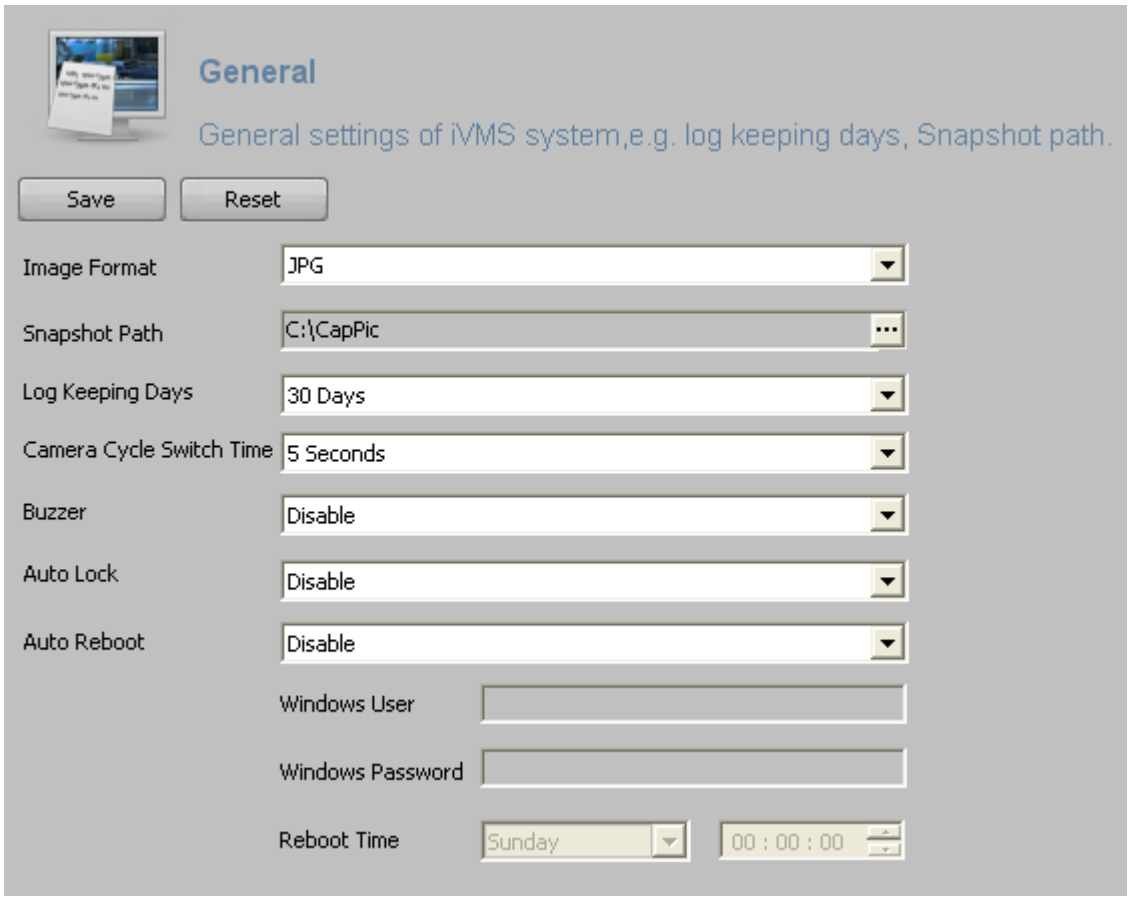
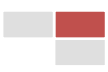


Figure 6-2 General Settings Interface

The General Settings mainly includes system parameters such as Log Keeping days, Snapshot Path, etc.

Parameters	Description
Image Format	Select JPG or BMP as the file format for live preview/playback snapshot images
Snapshot Path	Click […] and select default file path to save the snapshot images
Emergency	There is a [Start Emergency Record] option in the main console interface for fast record on emergency conditions, and users can set the emergency record time length here under [Emergency] option as 15 seconds, 30 seconds (default), 45 seconds, 1 minute, 1.5 minutes, 2 minutes or 3 minutes
Log Keeping Days	Log files can be keep in the database for maximum 7 days, 15 days, 30 days (default), 60 days, 90 days or 120 days, and the previous log files will be automatically deleted when it expires the log keeping days.
Switch Time	Set the auto switch time interval for live preview cameras as 3 seconds, 5 seconds (default), 10 seconds, 15 seconds, 30 seconds or 1 minute
Buzzer	If [Buzzer] is enabled, then the buzzer on the PC motherboard will sound when there is exception alarm (illegal network access, hard disk full or hard disk read/write error). This option is disabled by default
Auto Lock	If [Auto Lock] is enabled, then the iVMS-2000 software will be lockup automatically after there is no keyboard/mouse operation for over a certain time period, and users need to login again for software operation. Auto Lock option can be set as disable (default), or lockup after 1 minutes, 5 minutes, 10 minutes, 30 minutes or 1 hour
Auto Reboot	PC and iVMS-2000 software will reboot on the preset [Auto Reboot] time. Click the checkbox to enable/disable this option. If [Auto Reboot] is enabled, users also need to configure Windows User/Password and also Reboot Time to let the configuration take effect
Windows User	User name to login the Windows OS
Windows Password	Password for the Windows login user
Reboot Time	Set the reboot date and time each week

Note: Users need to click [Save] button after parameter modification to save the General Settings configuration.



6.2 Network

Click [Network] to enter Network settings interface (Figure 6-3).

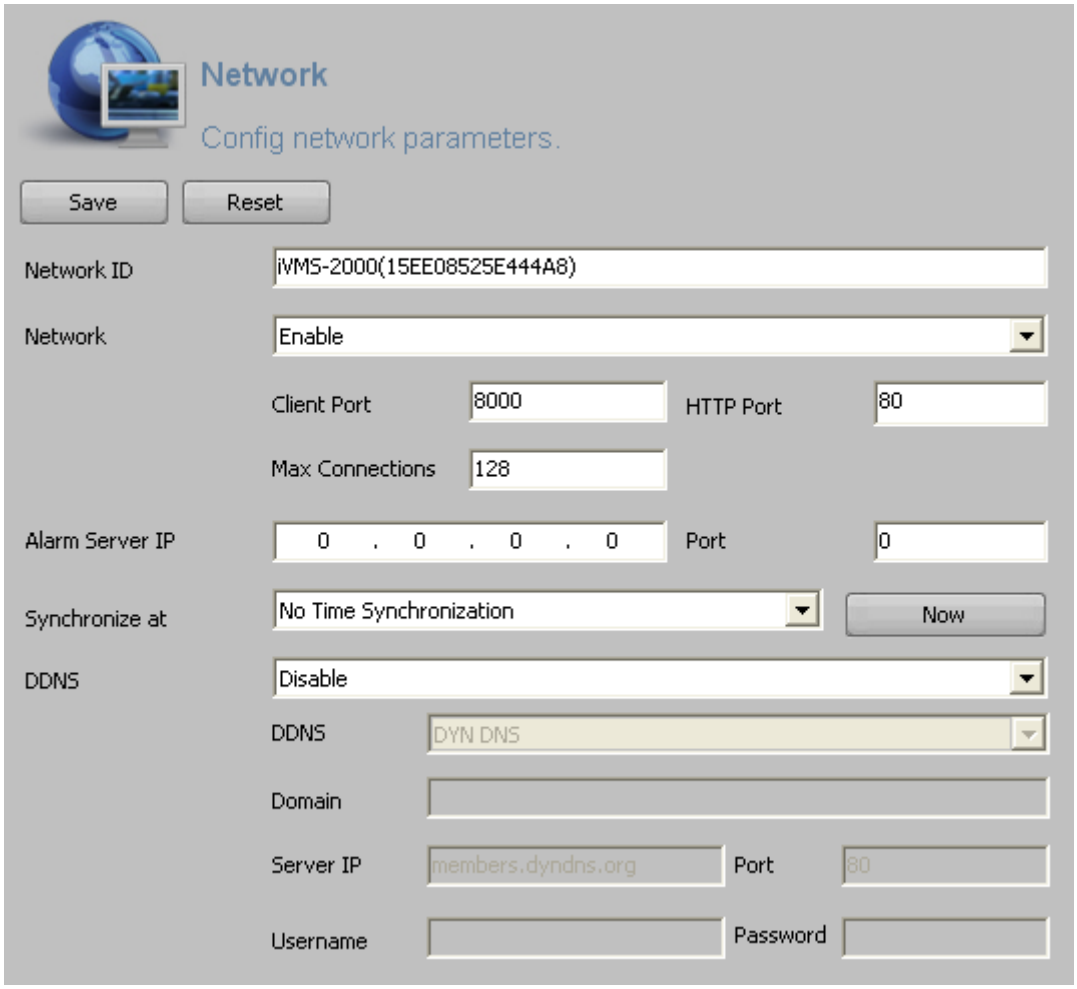
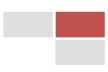


Figure 6-3 Network Settings Interface

Network settings is for configuration of network parameters.

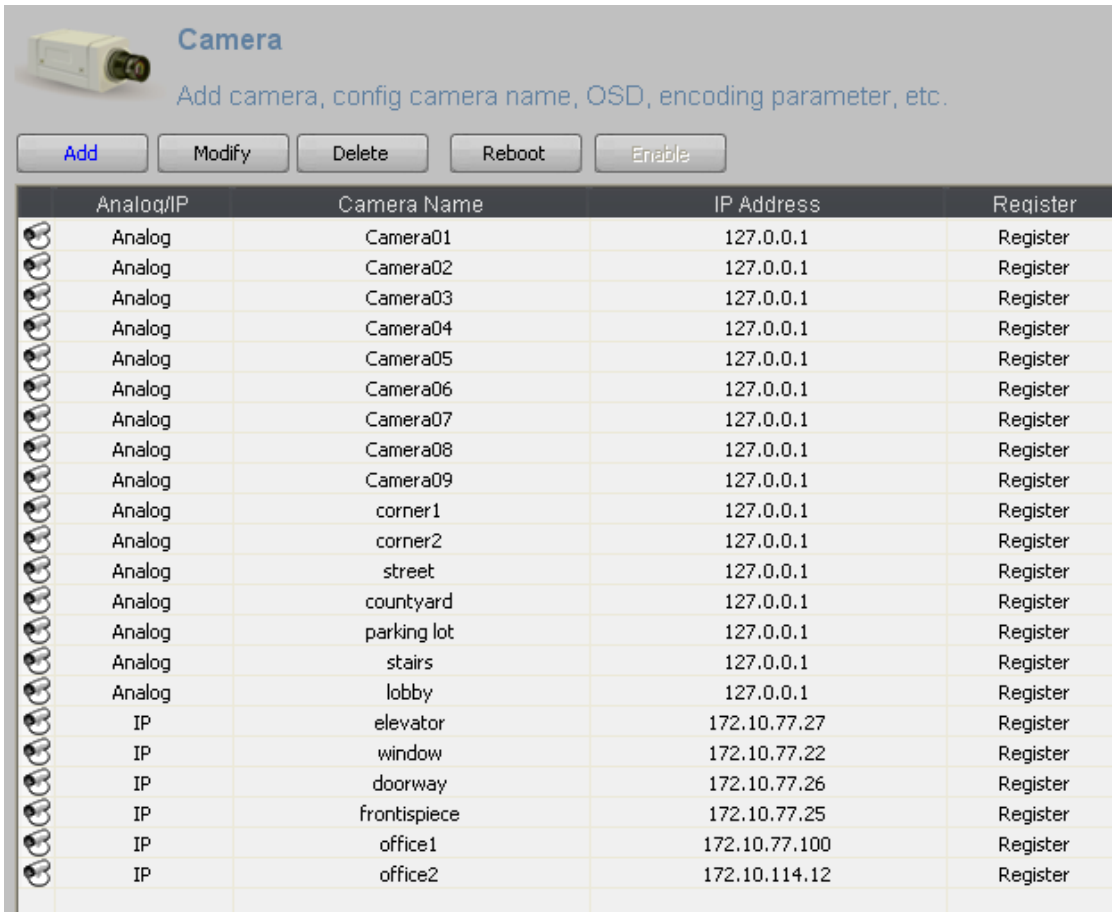
Parameters	Description
Network ID	Network ID to identify the software in the network, the default network ID is iVMS-2000(local host name)
Network	[Network] is enabled by default to allow client software and IE client connection. If [Network] is disabled, then the client software or IE client cannot connect to this iVMS-2000 server.
Client Port	The iVMS-2000 server port for client connection, which can be set between 2000~65534 (default port: 8000)
Maximum Connections	Maximum camera connection number via network, which can be set between 5~128 connections (default maximum connection: 128)
Alarm Server IP	Alarm info will be upload to this alarm server IP
Port	Port number for the alarm server
Synchronize at	Synchronize the time of all the IP cameras according to iVMS-2000 server. This option is disabled by default, and users can set the synchronize time at certain hour of a day.
Now	Click [Now] button to synchronize all the IP cameras at once
Enable DDNS	Enable/Disable DDNS
DDNS Protocol	DDNS protocol: DYN DNS / PeanutHull
Domain Name	Domain name registered on DDNS server
Server IP	DDNS server address
Port	DDNS server port
User Name	User name for the DDNS domain name
Password	Password for the DDNS domain name

Note: Users need to click [Save] button after parameter modification to save the Network configuration, and the modification of some parameters would require iVMS-2000 software reboot before taking effect.



6.3 Camera Settings

Click [Camera] to enter Camera Settings interface (Figure 6-4). Users can add/delete camera inputs and modify the parameters of each camera.



Analog/IP	Camera Name	IP Address	Register
Analog	Camera01	127.0.0.1	Register
Analog	Camera02	127.0.0.1	Register
Analog	Camera03	127.0.0.1	Register
Analog	Camera04	127.0.0.1	Register
Analog	Camera05	127.0.0.1	Register
Analog	Camera06	127.0.0.1	Register
Analog	Camera07	127.0.0.1	Register
Analog	Camera08	127.0.0.1	Register
Analog	Camera09	127.0.0.1	Register
Analog	corner1	127.0.0.1	Register
Analog	corner2	127.0.0.1	Register
Analog	street	127.0.0.1	Register
Analog	countyard	127.0.0.1	Register
Analog	parking lot	127.0.0.1	Register
Analog	stairs	127.0.0.1	Register
Analog	lobby	127.0.0.1	Register
IP	elevator	172.10.77.27	Register
IP	window	172.10.77.22	Register
IP	doorway	172.10.77.26	Register
IP	frontispiece	172.10.77.25	Register
IP	office1	172.10.77.100	Register
IP	office2	172.10.114.12	Register

Figure 6-4 Camera Settings

6.3.1 Add Camera

Analog cameras will be listed automatically if there is Hikvision card plugged in the PC, and does not need to be added manually.

For the IP cameras, please click [Add] to add IP cameras.

[Auto Detect and Add]

The “Add Camera” interface is under [Auto Detect and Add] mode by default (Figure 6-5).

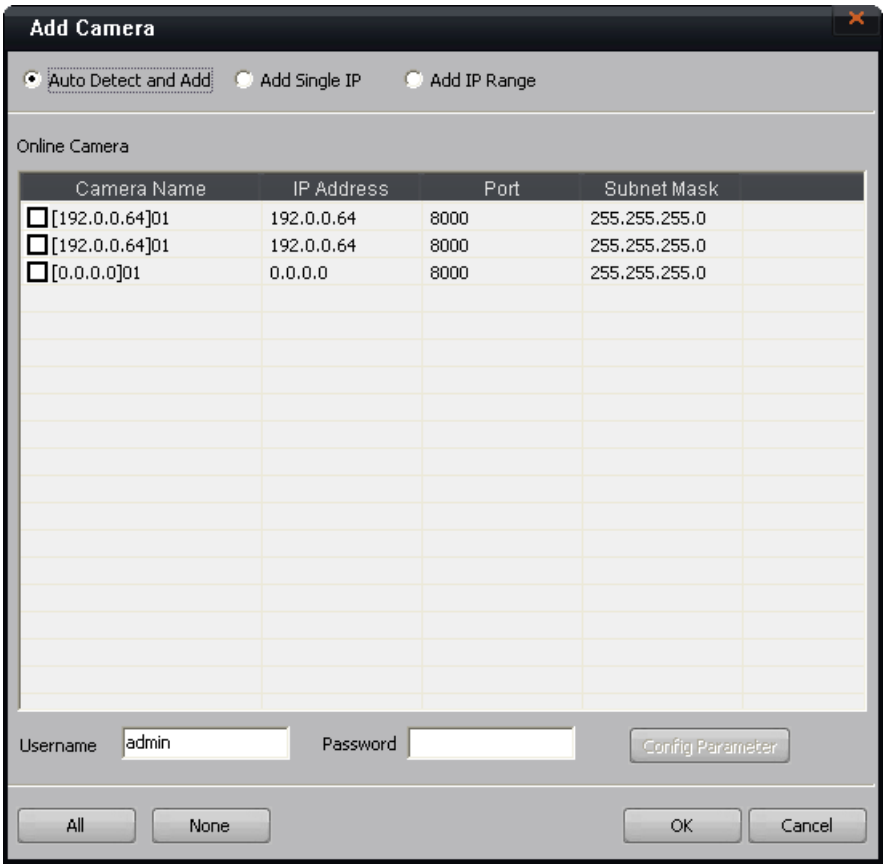


Figure 6-5 Auto Detect and Add IP Cameras

Notes: All the Hikvision IP cameras are with same IP address by default, and needs to be configured in [Config Parameter] (Figure 6-6).

Users can select an on-line camera, input its login user name and password, and then click [Config Parameter] to modify the camera parameter as Figure 6-6.

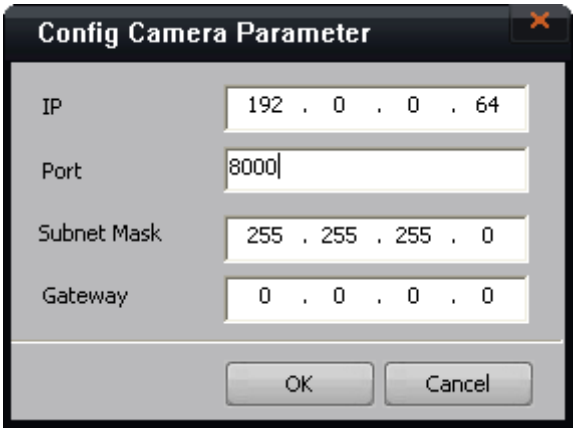


Figure 6-6 Config Parameter

[Add Single IP]

Select “Add Single IP” as Figure 6-7, and input the IP address, port number, user name and password. Click [Get Camera Info] to get on-line/off-line status of this IP camera (the status will be

displayed on the IP camera list). If there is user name or password error, there will be warning message prompt on screen.

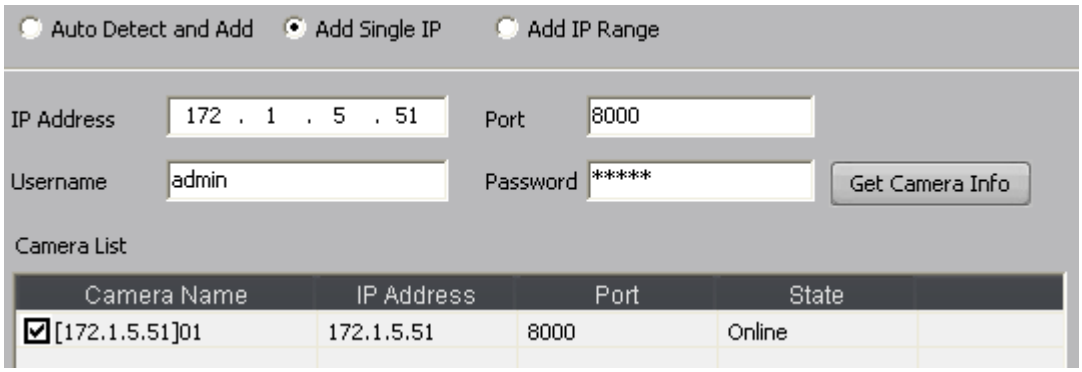


Figure 6-7 Add Single IP

[Add IP Range]

Select “Add IP Range” as Figure 6-8, and input start/end IP address, port number, user name and password. Click [Get Camera Info] to get on-line/off-line status of this IP camera (the status will be displayed on the IP camera list). And if the camera has already been added into the system, then it will not be displayed on the list.

There is a checkbox [Show online only] to enable/disable listing of off-line cameras.

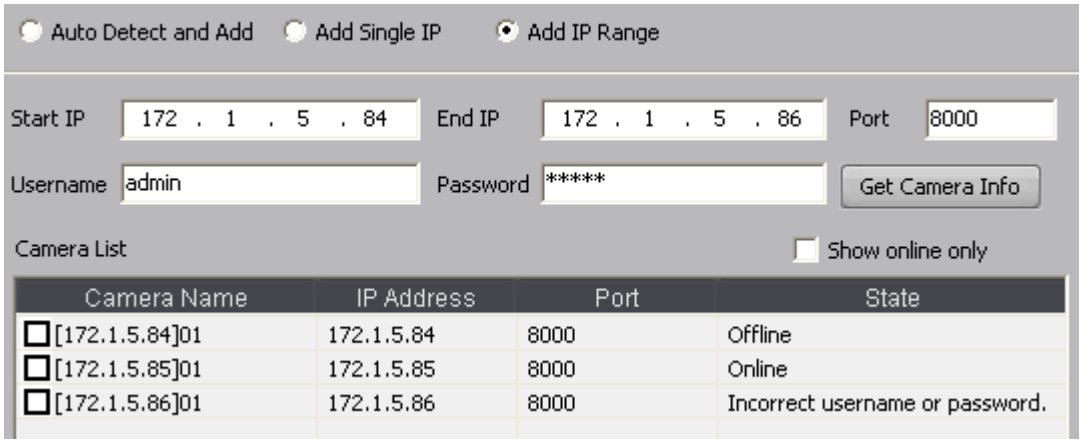


Figure 6-8 Add IP Range

6.3.2 Modify Camera Info

Select a camera and click [Modify] or double click on the camera, then the Camera Config dialog box will prompt as Figure 6-9. Users can modify the camera parameters.

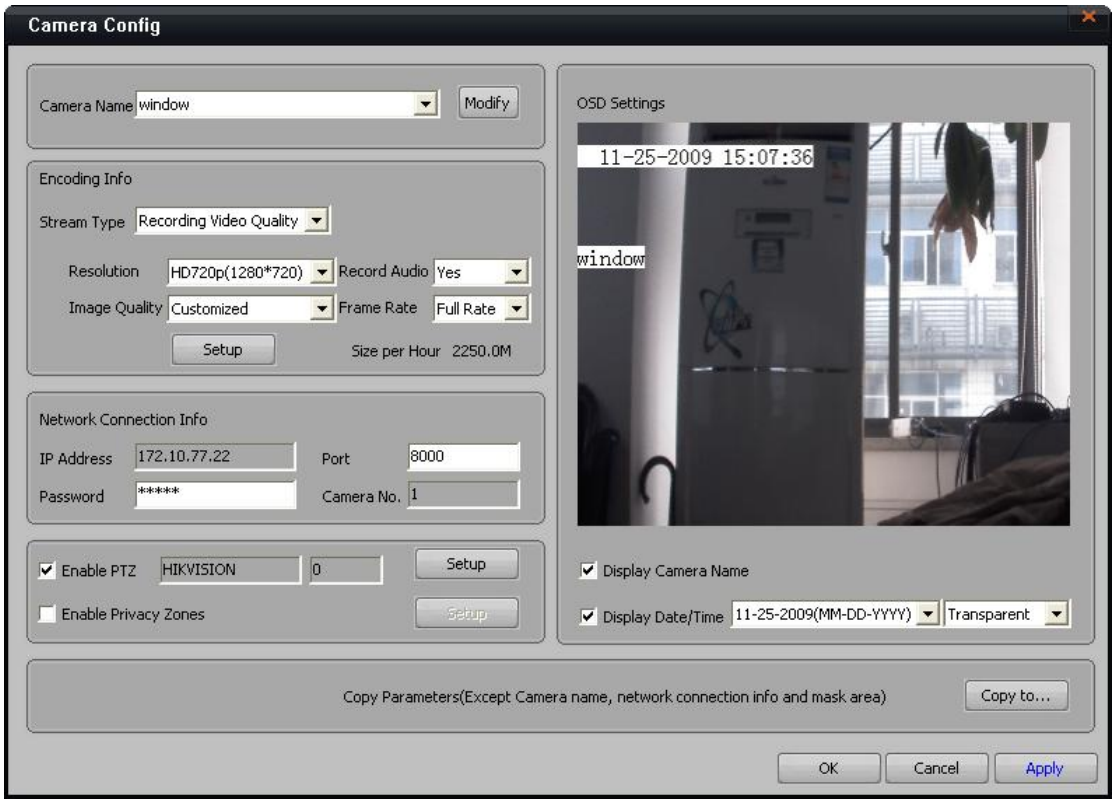


Figure 6-9 Camera Config

[Camera Name]

User can select camera name by either downward list or click [Modify] button and input camera name as Figure 6-10.

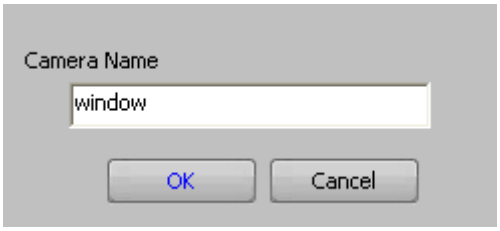


Figure 6-10 Modify Camera Name

[Encoding Info]

Set encode parameters

[Stream Type]

Select main stream/ sub stream/ event parameters configuration mode

[Resolution]

Set image resolution, the resolution can be dynamically adjusted without rebooting

[Record Audio]

Record pure video stream or video& audio stream

[Image Quality]

Set image quality of recorded video. There is level 1~8 as Figure 6-11, and the record data length per hour is different under each level. Users can also click [Setup] and for custom image

quality settings.

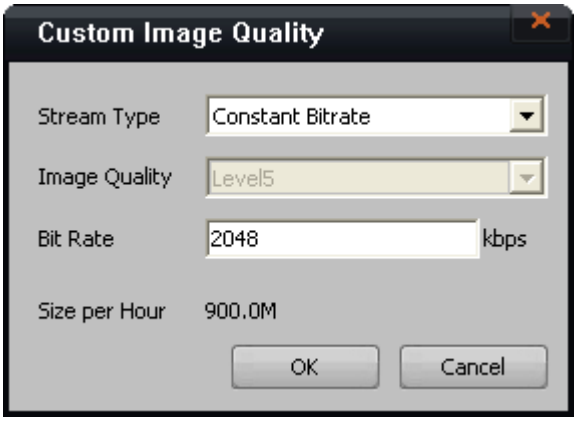


Figure 6-11 Custom Image Quality

[Network Connection Info]

The camera IP, port number, login user name and password, camera number is listed here. Users can modify [Port] and [Password].

[Enable PTZ]

This option should be enabled if PTZ operations are required for the camera. Click [Setup] and configure PTZ parameters as Figure 6-12.

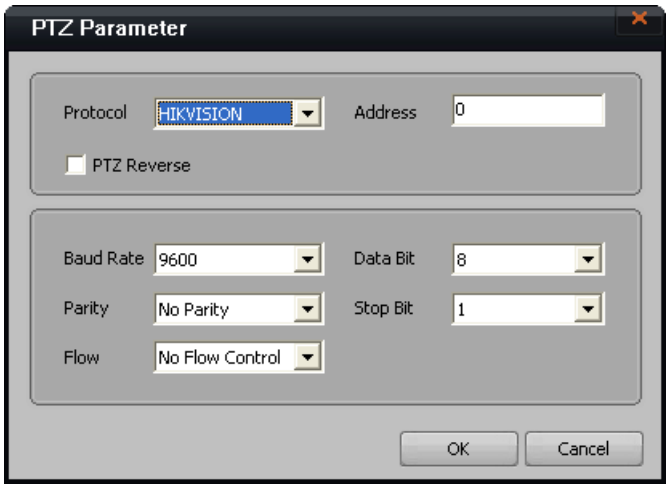


Figure 6-12 PTZ Parameters

[PTZ Reverse]

The PTZ operation will be reverse if this option is enabled, i.e. PTZ will pan left if it receives a "pan right" option.

Note: PTZ COM port configuration is under [Peripheral] configuration menu.

[Private Protect]

The live preview and record video image inside privacy protect area will be blocked as Figure 6-13.

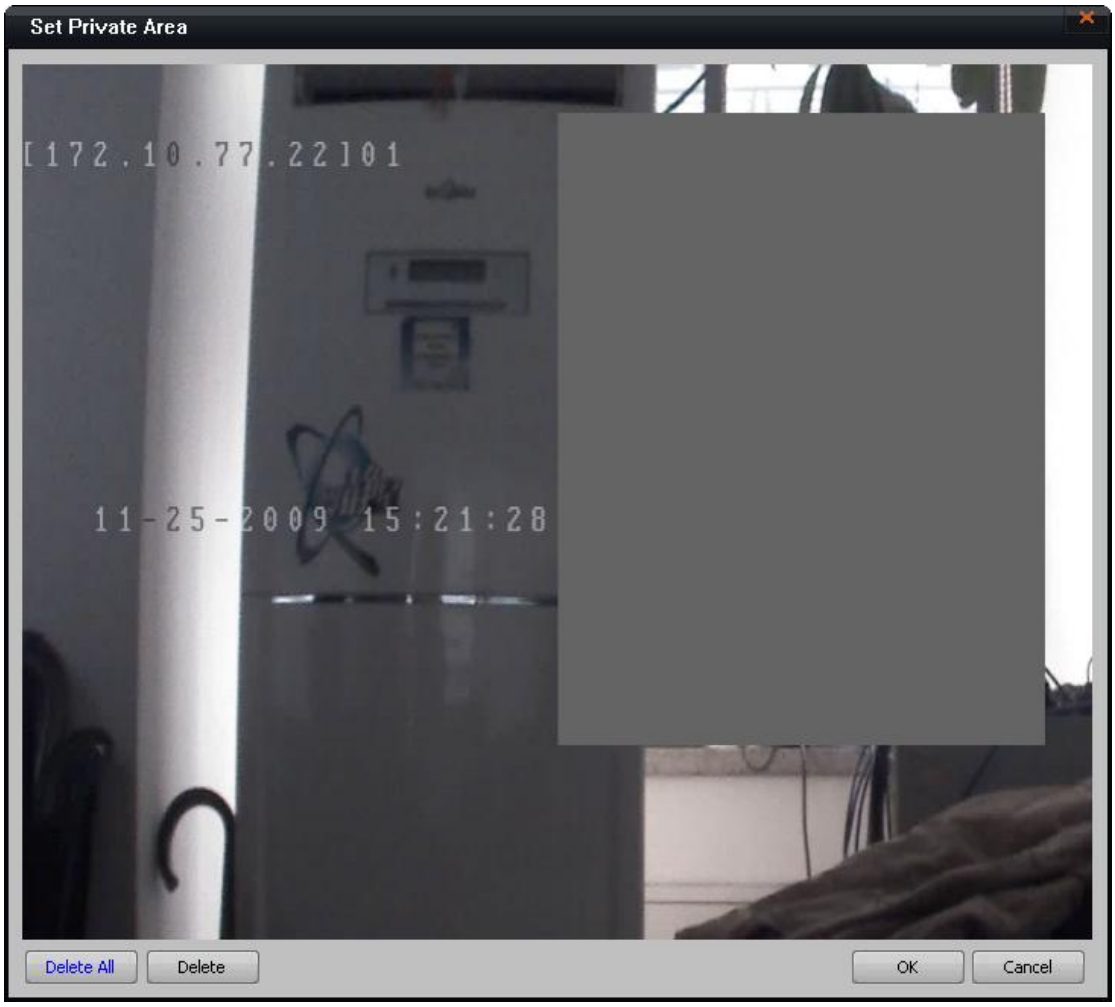


Figure 6-13 Privacy Protect

Users can set the privacy protect area via mouse dragging, and also adjust the its position and size via mouse operation. Users can also click to select a private protect area and click [Delete] to delete the privacy protect area, or click [Delete All] to delete all the privacy protect areas on the image.

Note: iVMS-2000 supports up to 4 private protect areas for each camera.

[OSD Settings]

Users can drag the OSD and change its display position via mouse operation, enable/disable [Display Camera Name], [Display Date/Time], and also choose the transparency and format of Date/Time display.

[Copy to]

Click this button to copy the Encode Parameters, Network Port and Password, OSD configuration to other cameras.

6.3.3 Delete Camera

Select one or multiple IP Cameras on the IP Camera list, and click [Delete] button and click [OK] in the prompt message box (Figure 6-14) to delete the selected IP camera(s).

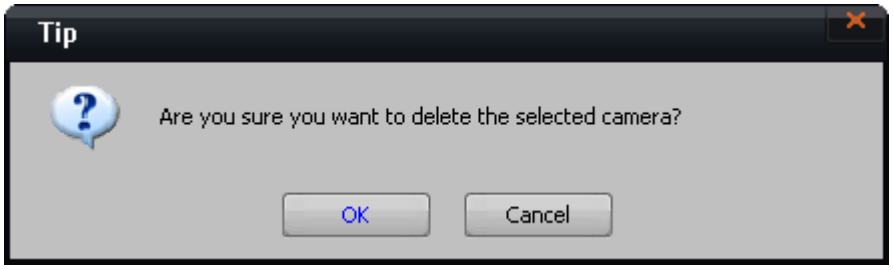


Figure 6-14 Delete IP Cameras

Note: Analog cameras cannot be deleted.

6.3.4 Reboot Camera

Select one or multiple IP Cameras on the IP Camera list, and click [Reboot] to reboot the selected IP camera(s). iVMS-2000 will automatically re-connect all the selected IP Cameras after rebooting.

Note: Analog cameras cannot be rebooted.

6.3.5 Enable/Disable Camera

Select an analog camera on the IP Camera list, and click [Disable] to disable this camera, users can click [Enable] again to enable this camera afterward.

Note: IP cameras cannot be enabled or disabled.

6.4 Group

Click [Group] to enter Group settings (Figure 6-15). Users can configure different camera group settings for flexible live preview configuration.

Figure 6-15 Group Settings

6.4.1 Add Group

Click [Add] and enter Add Group dialog box (Figure 6-16).

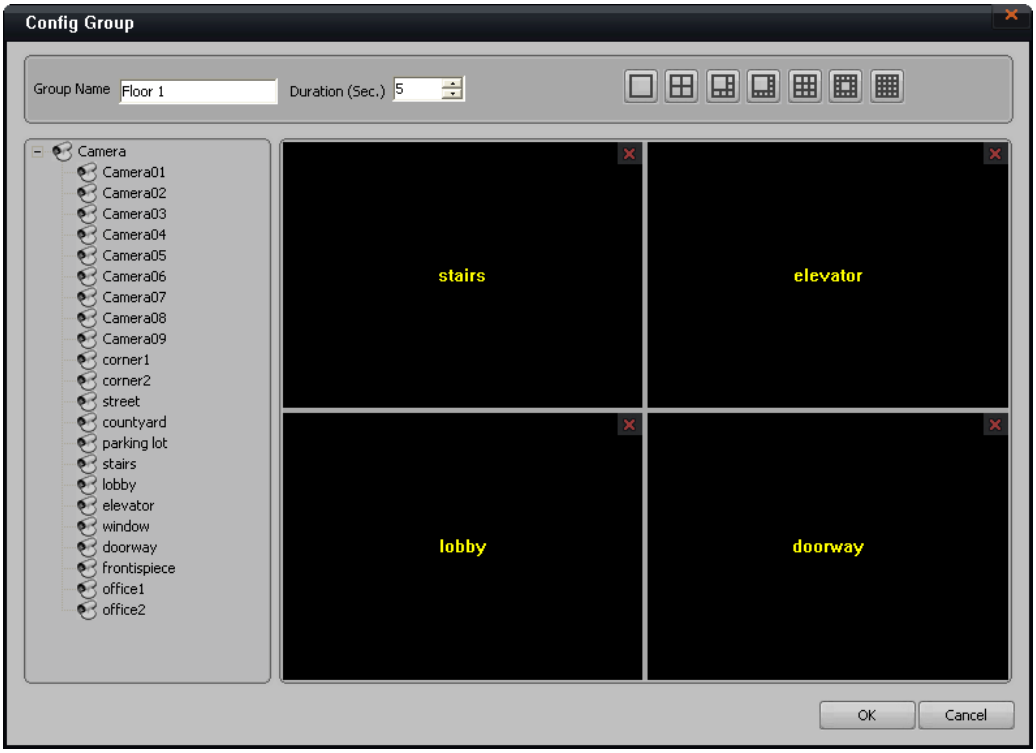


Figure 6-16 Add Group

Users can modify the auto-generated group name and duration interval, and also can select between different screen split modes by clicking relative icons. Click on a camera in camera list and drag it into the desired display screen position, and click [OK] to save the configuration. Users can click on the upper-right of each screen to delete the added camera.

6.4.2 Modify Group

Select a group and click [Modify] or double click on the group, and then the Group Modification dialog box will prompt and users can modify the group settings accordingly. The operation steps are same as “Add Group”.

6.4.3 Delete Group

Select the group(s) on the group list, click [Delete] and then click [OK] on the prompt message box (Figure 6-17) to delete settings of the selected group(s).

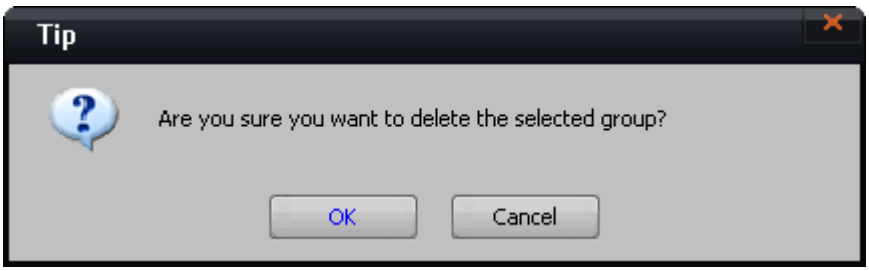


Figure 6-17 Delete Group Message Box

6.5 Record Schedule

Click [Schedule] to enter record schedule configuration interface (Figure 6-18) and configure record schedule for each camera.

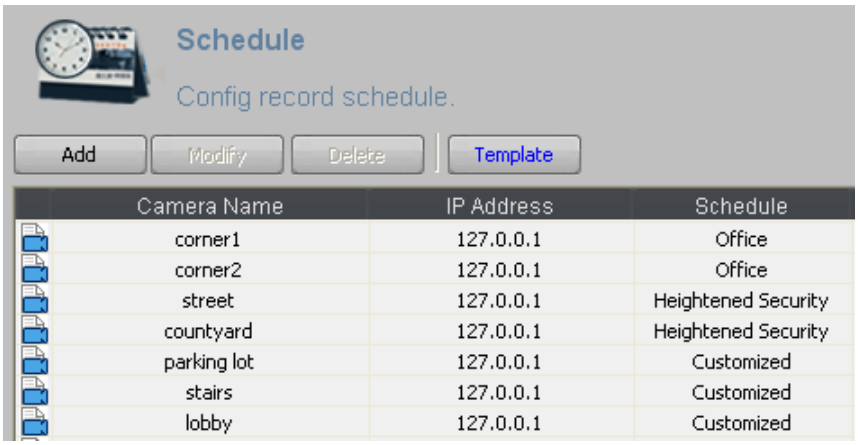


Figure 6-18 Record Schedule Configuration Interface

6.5.1 Add Record Schedule

All the cameras are configured in 24-hour arm and motion recording mode by default. If any of the record schedule as been deleted, users can click [Add] to re-configure the recording schedule (Figure 6-19).

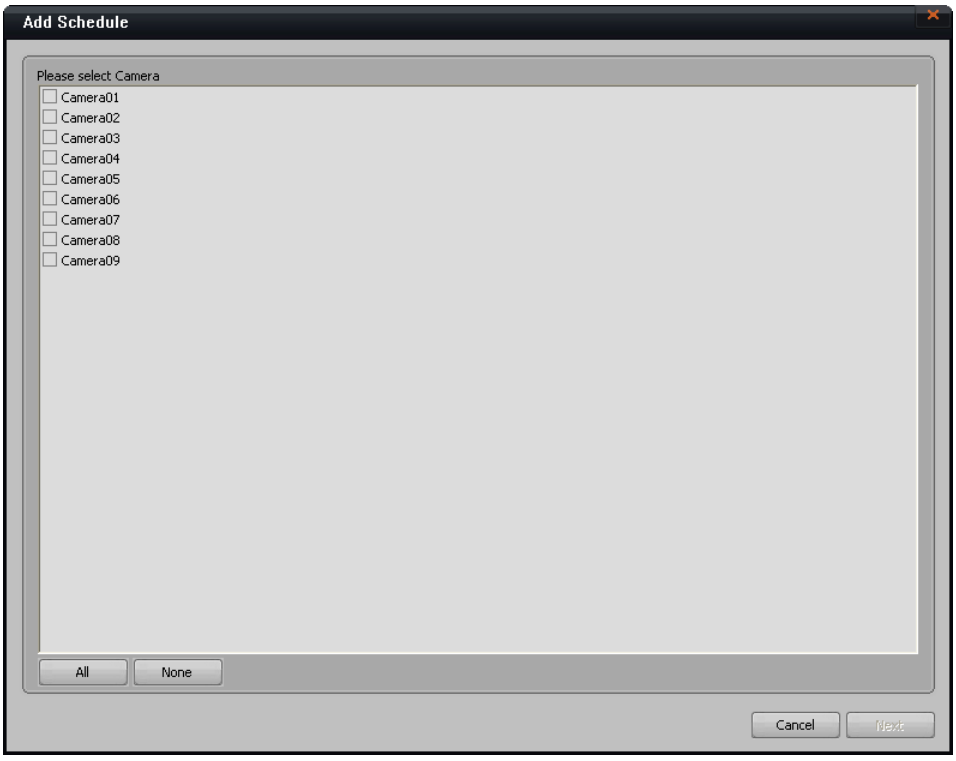


Figure 6-19 Select Camera(s) before Adding Record Schedule

Select the camera in the “Modify Record Schedule” dialog box, and click [Next] to configure record schedule in the prompt dialog box (Figure 6-20):

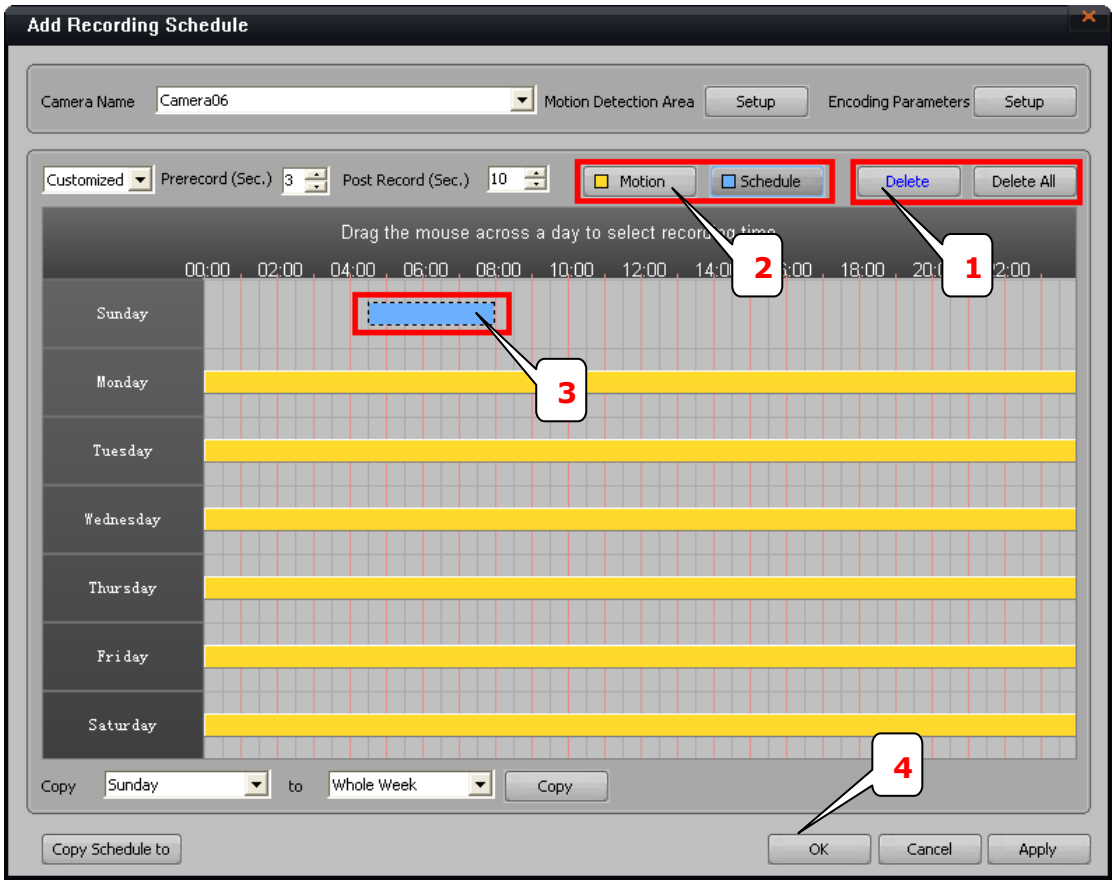


Figure 6-20 Add Arm Schedule for Record Schedule Configuration

The default record schedule is set as 24-hour arm & motion detection mode, and users can modify the schedule via configuration steps below:

1. Click [Delete] / [Delete All] to delete current record schedule;
2. Click [Motion] / [Schedule] to select record mode;
3. Drag the mouse in each day’s time bar to add record schedule (support up to 8 pieces of time schedule per day), and each pieces of time schedule can be modified in position and length, users can also copy the time settings to the whole week;
4. Click [OK] to complete the record schedule settings.

Select relative camera in the drop-down list of [Camera Name] to switch to this camera’s record schedule settings.

Click [Setup] in [Motion Detect Area] to set motion detect area.

Click [Setup] in [Encoding Parameters] to set encoding parameters for the camera (Figure 6-21).

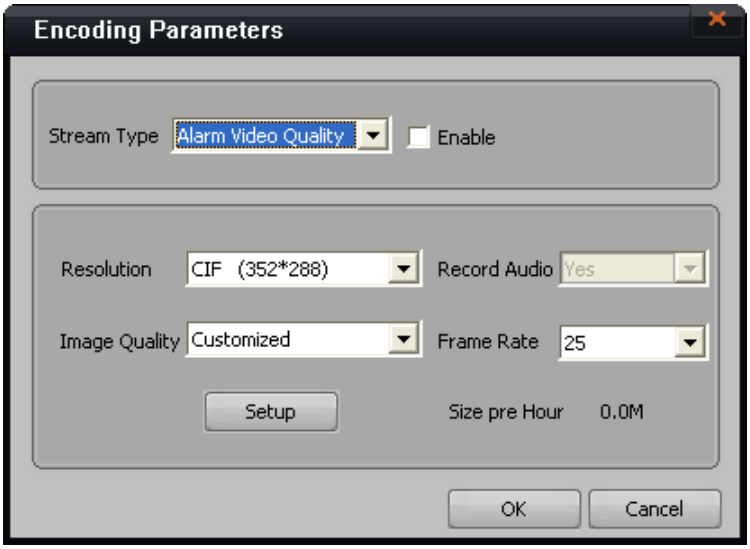


Figure 6-21 Encoding Parameters Configuration

Users can select [Customized] or [Template] mode for record schedule setup:

[Customized]

Users can set pre-record time and post-record time under [Customized] mode. Click [Motion] or [Schedule] to select the record mode for each time period, and then drag the mouse and draw time schedule on the time bar, and it supports up to 8 record periods per day. Select a certain record period and click [Delete] to delete this record period, or click [Delete All] directly to delete all the record period settings for this camera. Click on any of the weekly date to select 24-hour of this day, and click [Copy Schedule to] to copy the record period settings to other days.

[Template]

Under [Template] mode, users can select record schedule templates which are already edited, or click [Edit Template] to enter Record Schedule setting dialog box.

[Copy Schedule to]

Copy the record schedule settings to other cameras.

6.5.2 Modify Record Schedule

Select a record schedule and click [Modify] or double click on it to enter Record Schedule setting dialog box (Figure 6-22) and modify the record schedule.

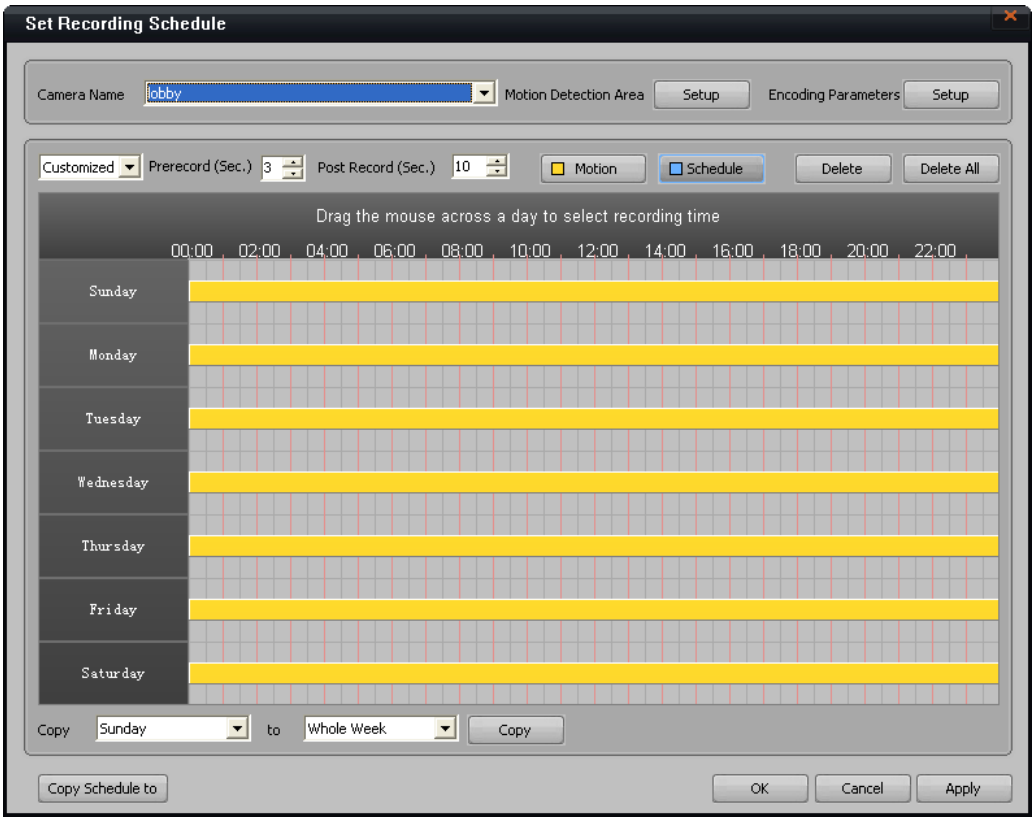


Figure 6-22 Modify Record Schedule

The modification steps are similar with operation steps in “Add Record Schedule”.

6.5.3 Delete Record Schedule

Select record schedule(s) in the schedule list and click [Delete], click [OK] in the prompt dialog box (Figure 6-23) to delete the selected record schedule(s).

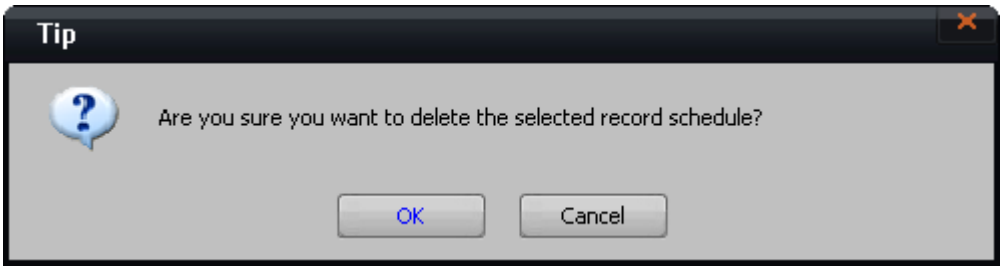


Figure 6-23 Delete Record Schedule

6.5.4 Record Schedule Template

Click [Template] to enter Record Template dialog box and edit record schedule template (Figure 6-24).

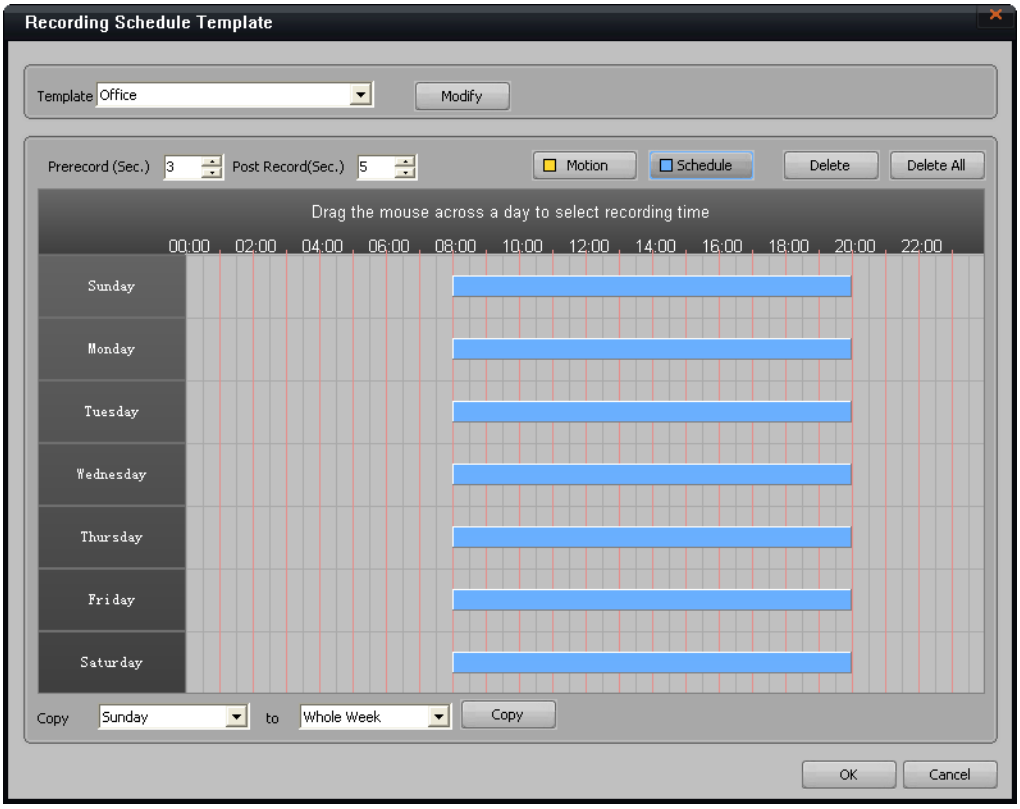


Figure 6-24 Record Schedule Template

There are totally 10 record templates, of which 5 are re-configured (adjustable). Users can select the template in the drop-down list and edit its content.

Click [Modify] and modify the template name, and edit record period for the template in similar way as adding record schedule.

6.6 Alarm Linkage

Click [Alarm] and enter alarm linkage configuration interface (Figure 6-25). Users can configure link events for motion detection, video loss, video tamper and exception alarm of each camera.

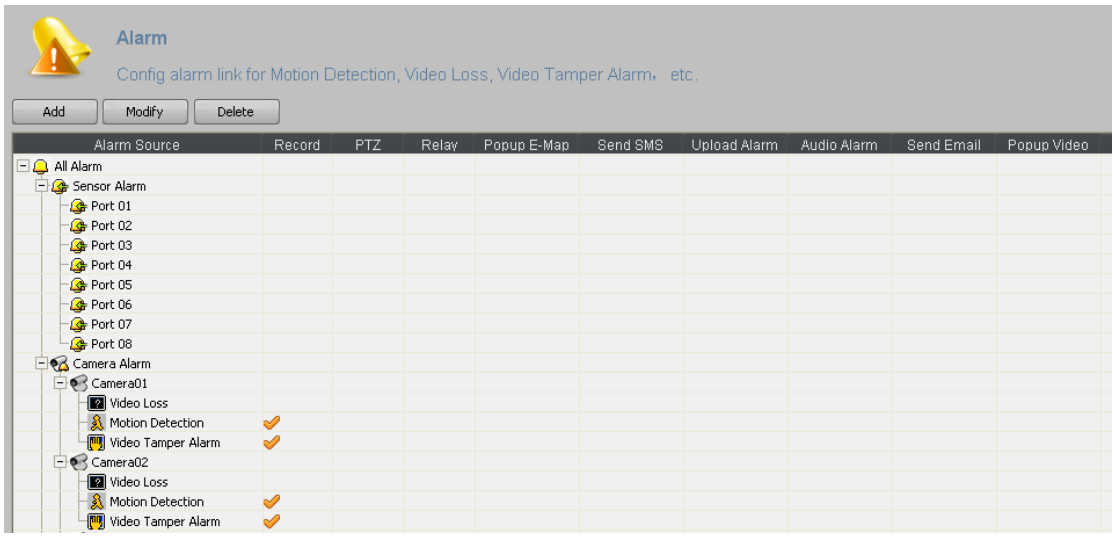


Figure 6-25 Alarm Linkage Configuration Interface

6.6.1 Add Alarm Linkage

All the motion and video tamper alarm has been automatically added after the camera is added into the system, and I/O alarm will also be automatically added after adding alarm box into the system. Exception alarm linkage will not be added automatically, and users can add linkage for exception alarm by clicking [Add] and configure in the Add Alarm dialog box (Figure 6-26).

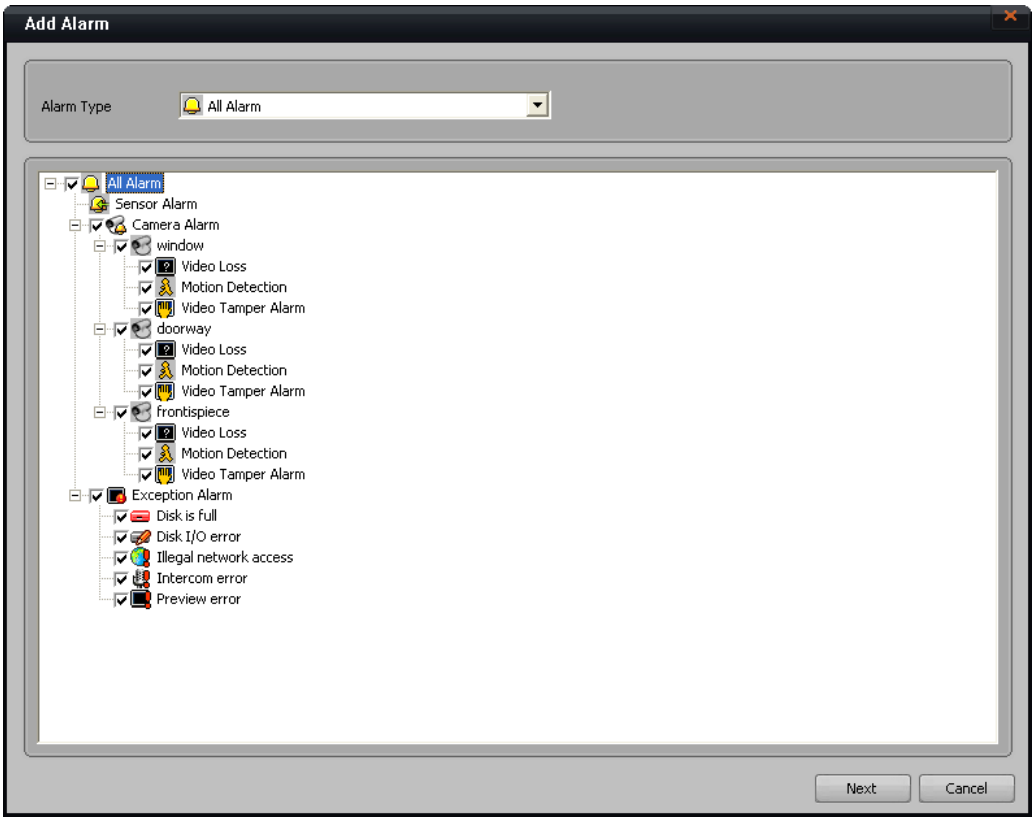


Figure 6-26 Add Alarm

Select the alarm input source to be added, and click [Next] to add alarm linkage (Figure 6-27, Figure 6-28 and Figure 6-29).

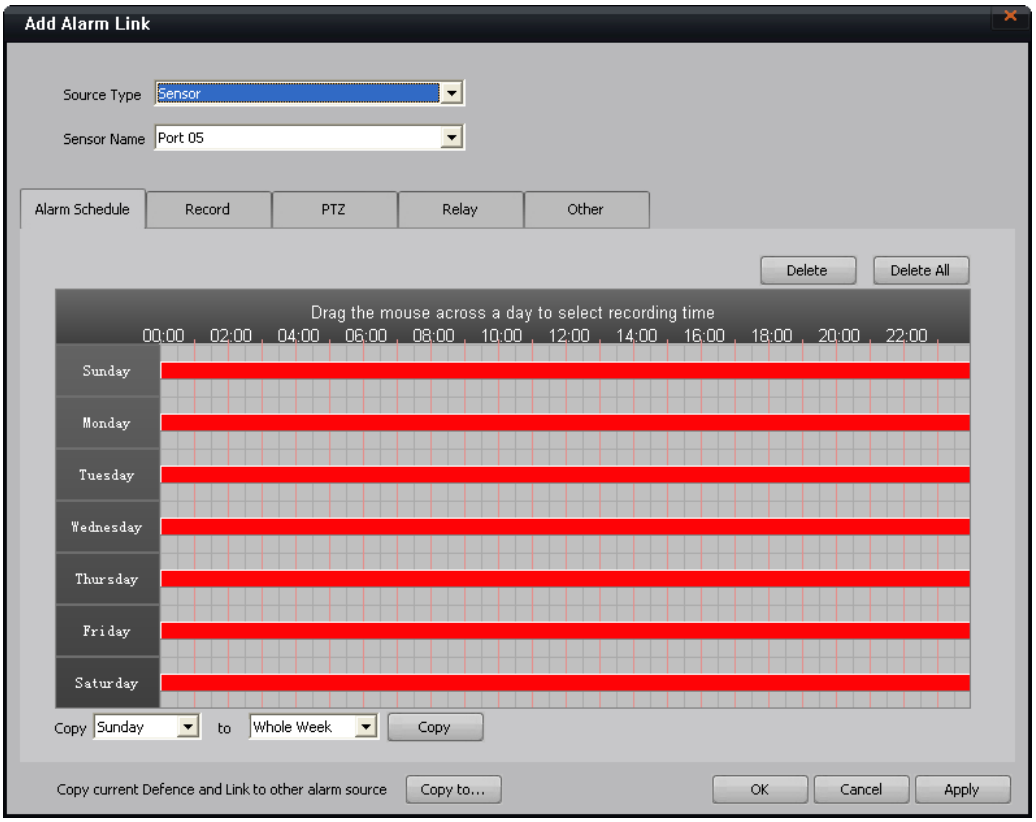


Figure 6-27 Add Alarm Input for Alarm Linkage

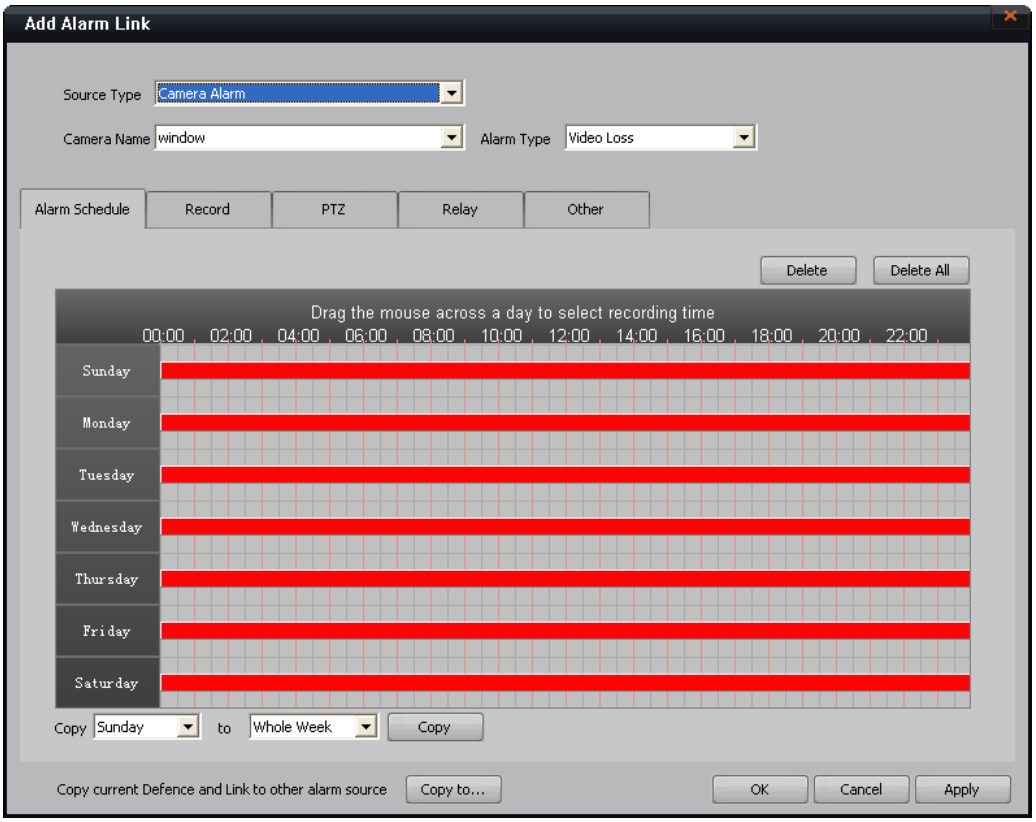


Figure 6-28 Add Camera Alarm Schedule for Alarm Linkage

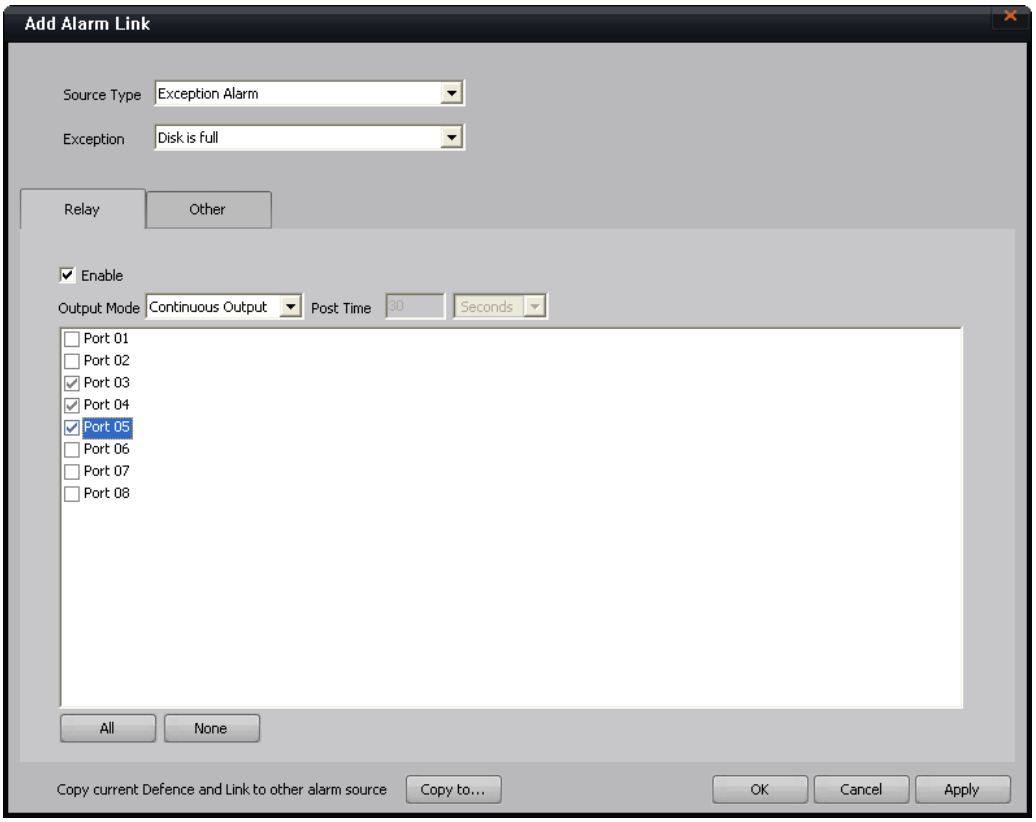


Figure 6-29 Add Exception Alarm

Select alarm input source in [Alarm Type]. If the alarm type is [Sensor Alarm], please select relative sensor name and configure alarm linkage afterwards; or if the alarm type is [Camera Alarm], please select the alarm link camera and sub type of alarm ([Video Loss], [Motion Detection], [Video Tamper Alarm]) and configure alarm linkage afterwards; else if the alarm source is [Exception], please select relative exception type and configure alarm linkage afterwards.

[Arm Schedule]

Arm schedule for alarm linkage is set as 24-hour mode by default and the configuration steps for arm schedule is basically the same as record schedule settings. Users can set up to 8 arm periods for each day (Figure 6-30).

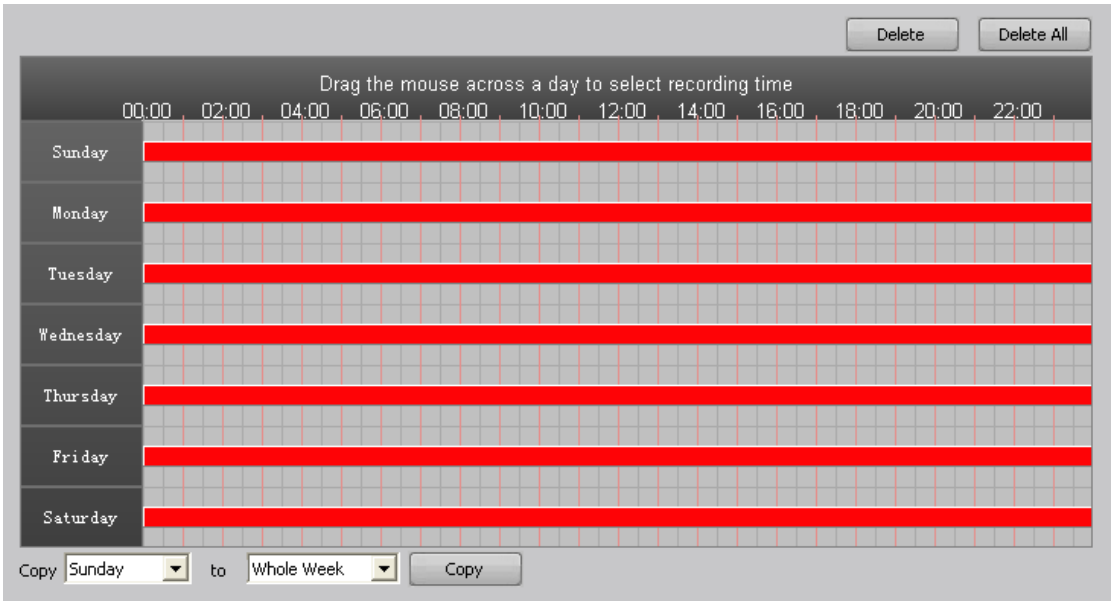


Figure 6-30 Arm Schedule Configuration for Alarm Linkage

[Record]

Click [Enable] and set pre-record / post-record time, and select recording camera(s) to set camera recording for alarm linkage (Figure 6-31).

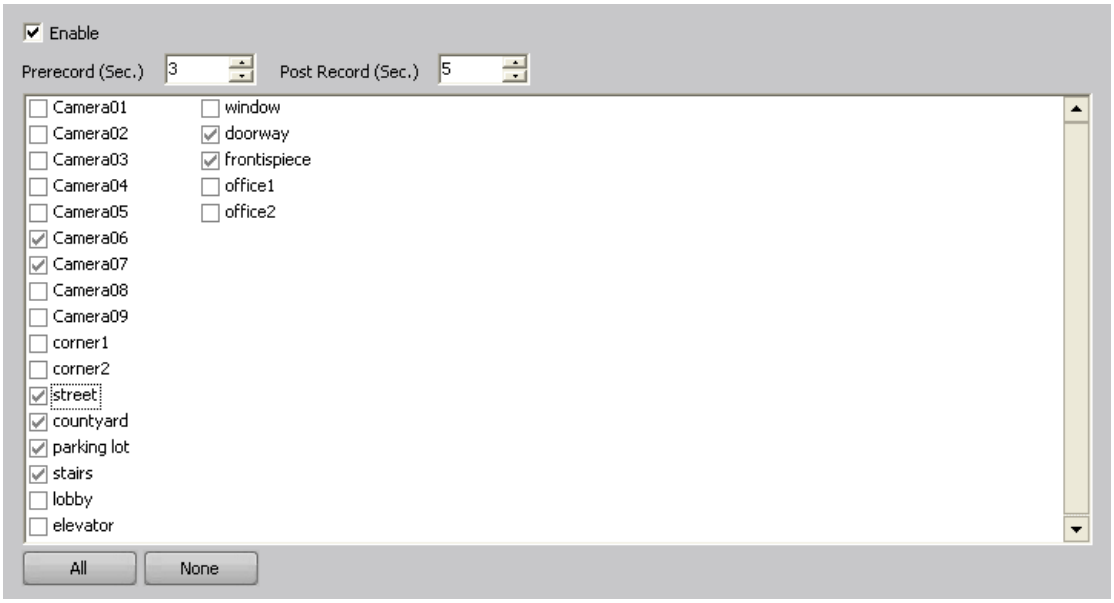


Figure 6-31 Alarm Record Configuration

[PTZ]

Click [Enable] and set PTZ event for alarm linkage (Figure 6-32).

Select PTZ cameras and alarm link type (Preset/Patrol/Pattern) and select the preset/patrol/pattern which should be linked to the alarm accordingly. Users can also set a preset position to be returned to after alarm linkage event, and also duration time before returning.

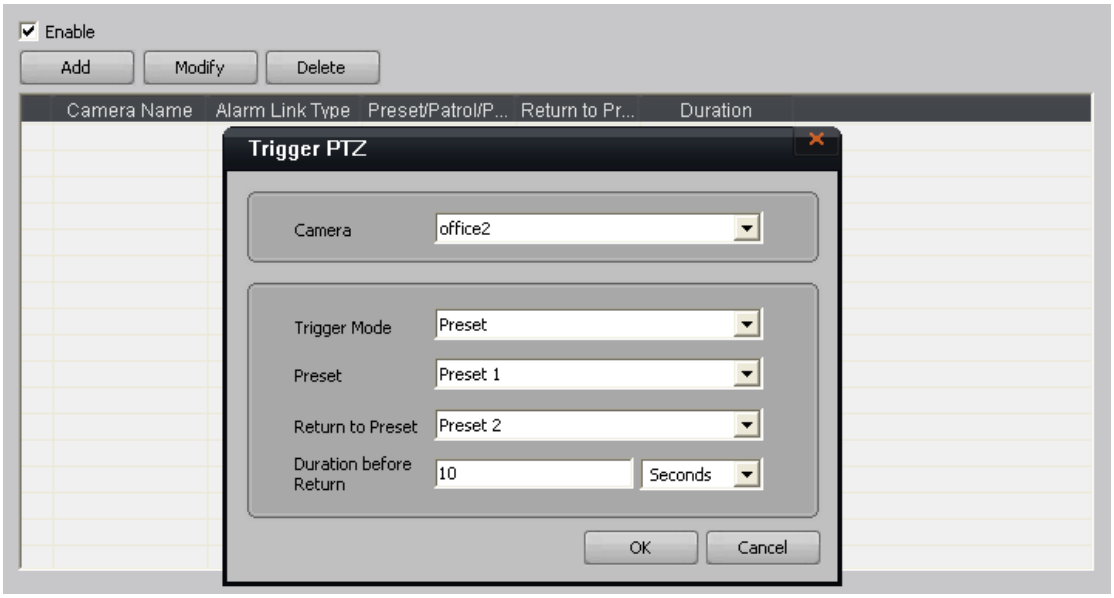


Figure 6-32 Alarm Link PTZ Configuration

[Relay]

Click [Enable] and set relay output for alarm linkage, there are continuous/post output modes for relay configuration (Figure 6-33).

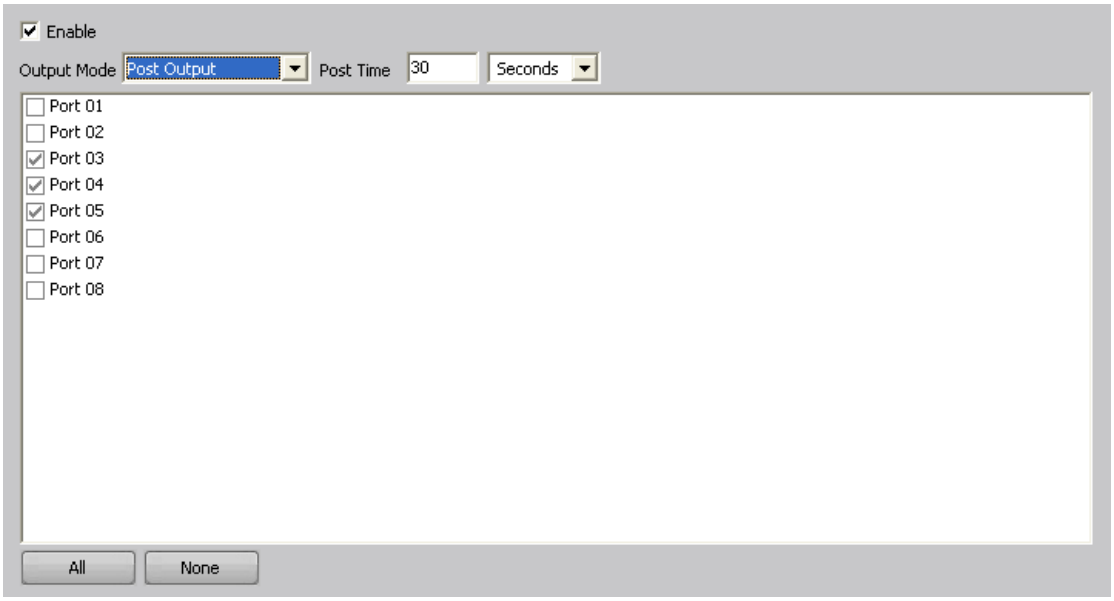


Figure 6-33 Relay Settings for Alarm Linkage

[Others]

Click [Prompt E-map], [Send SMS], [Upload Alarm], [Sound Alarm], [Send Email] or [Prompt Video] to configure other alarm linkage settings.

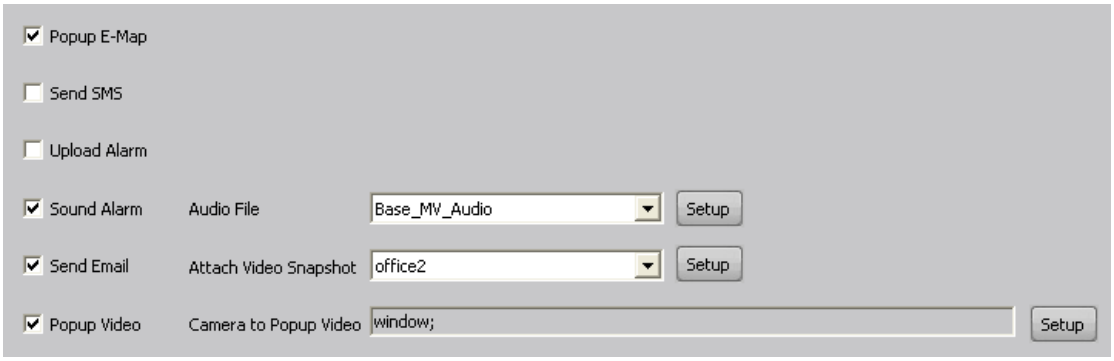


Figure 6-34 Other Alarm Linkage Configuration

Select [Sound Alarm] and select .wav files in the drop-down list. Please refer to the [Sound Config] of [Other] Configuration interface.

Select [Send Email] and select snapshot camera (or disable alarm snapshot). Please refer to the [Email Config] of [Other] Configuration interface.

Select [Prompt video] and select the camera live preview video to be prompt on alarm. Users can select up to 4 cameras (Figure 6-35).

Figure 6-35 Prompt Video Configuration for Alarm Linkage

Select [Send SMS] to configure short message linkage for the alarm. Users need to configure GSM/GPRS Modem in [Peripheral].

Note: For exception alarm linkage, users only need to configure [Relay] and[Others].

[Copy to]

Copy the arm/linkage configuration to other alarm input source.

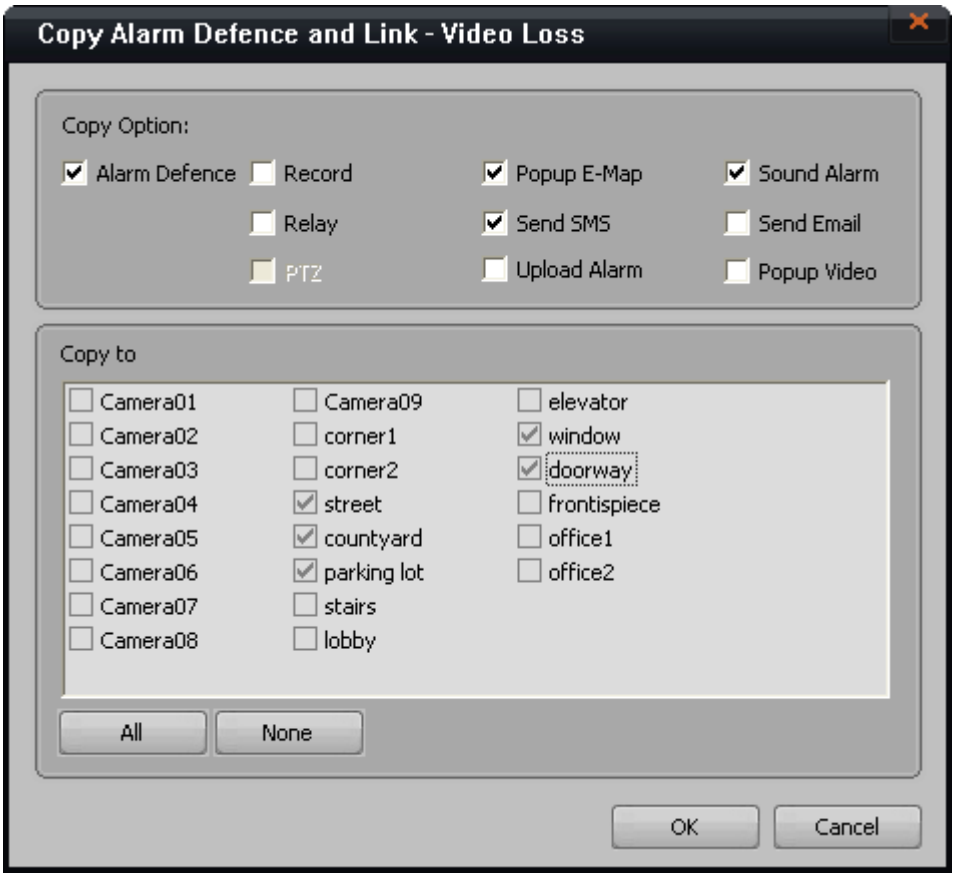


Figure 6-36 Copy Video Loss Linkage Configuration

6.6.2 Modify Alarm Linkage

Select an alarm input and modify the alarm input configuration; or select an alarm input under camera certain camera and modify all the alarm configuration for each camera; or select an exception alarm type and modify all the alarm types.

Alarm linkage modification steps are generally the same as add alarm linkage, except for the region settings under motion detection/ video loss link configuration.

Set Motion Detection Area (Figure 6-37):

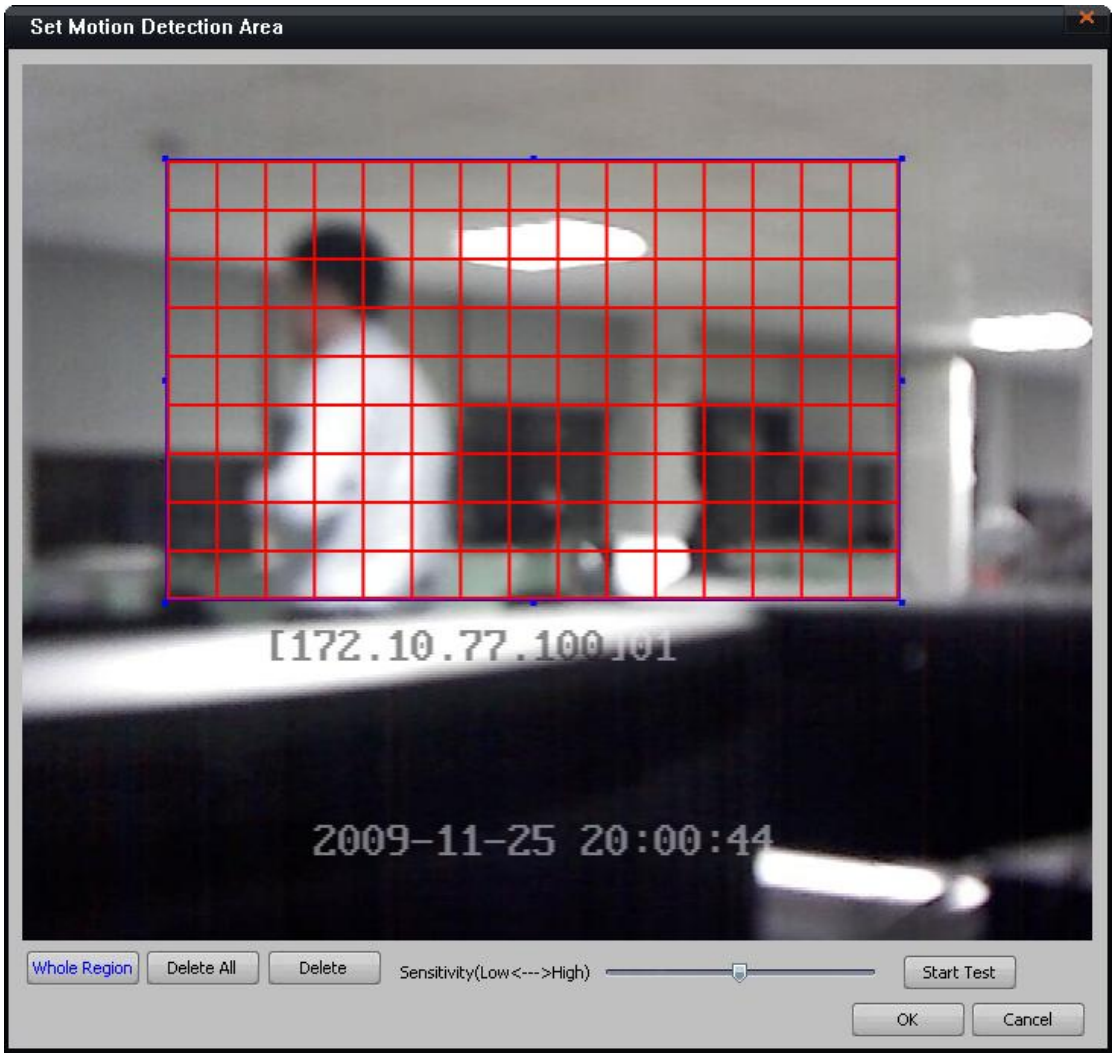


Figure 6-37 Set Motion Detection Area

Click [Region] during motion detection alarm modification and enter “Set Motion Detection Area” dialog box. Users can drag the mouse and draw the motion detect area, and also adjust the position and size of the region. After motion detect region has been configured, adjust the sensitivity level and click [Start Test]. If there is motion detected in the region, the brims of the blocks in the motion detection areas will flicker in red/green/blue colors.

Notes: iVMS-2000 supports up to 8 regions for each camera’s motion detection, and there is 7 levels for sensitivity.

Set Video Tamper Area (Figure 6-38):

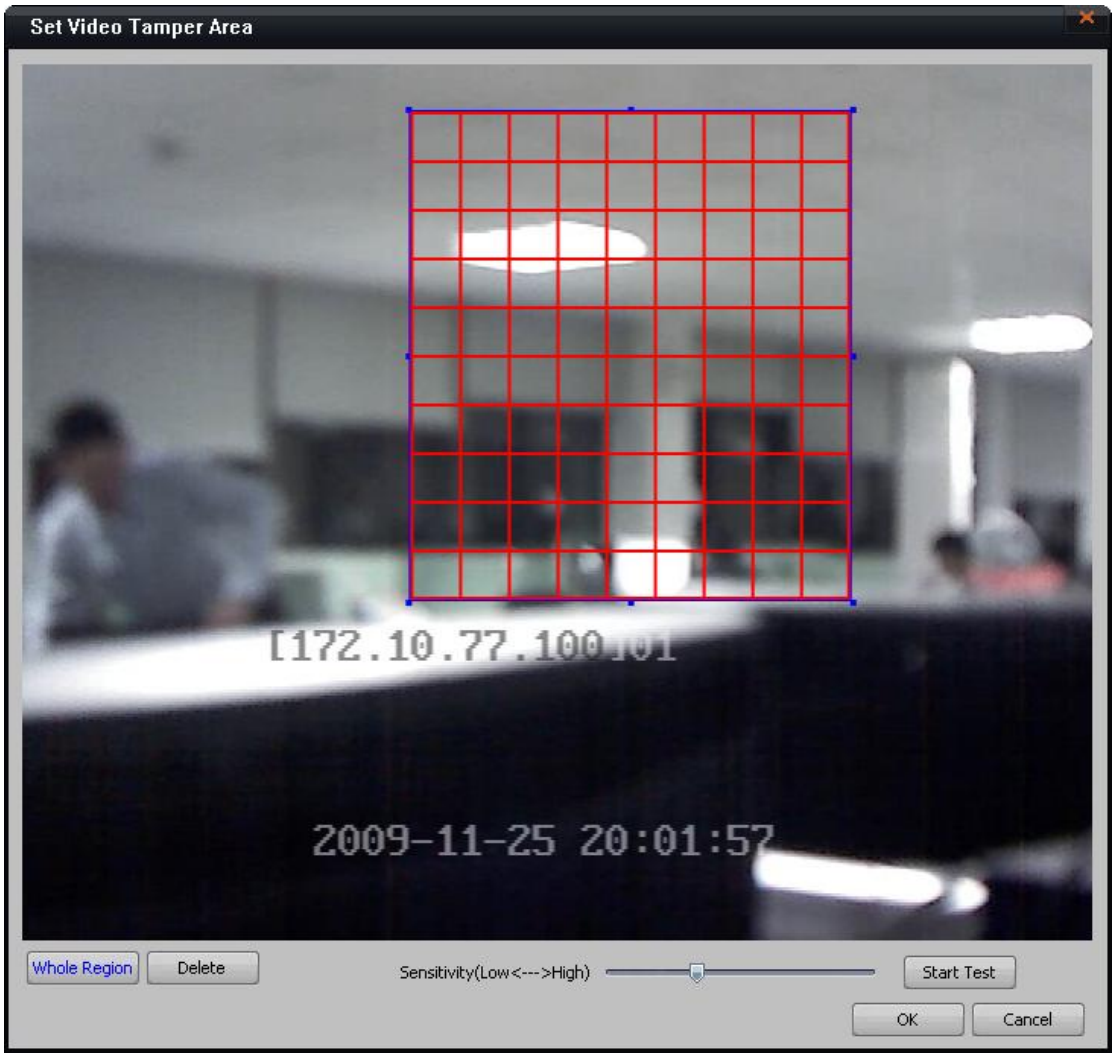


Figure 6-38 Set Video Tamper Area

Click [Region] during video tamper alarm modification and enter “Set Video Tamper Area” dialog box. The operation steps for Add/Modify/Move/Delete areas are similar to motion detection area configuration, and users can adjust the sensitivity level and click [Start Test]. If there is video tamper detected in the region, the brims of the blocks in the motion detection areas will flicker in red/green/blue colors.

Notes: iVMS-2000 supports 1 region for each camera’s video tamper detection, and there is 3 levels for sensitivity. (For analog camera inputs, the video tamper is set as whole-region detecting mode and users does not need to configure the region)

6.6.3 Delete Alarm Linkage

Select an alarm type and click [Delete] to enter delete alarm linkage dialog box, and click [OK] to delete the alarm linkage configuration (Figure 6-39).

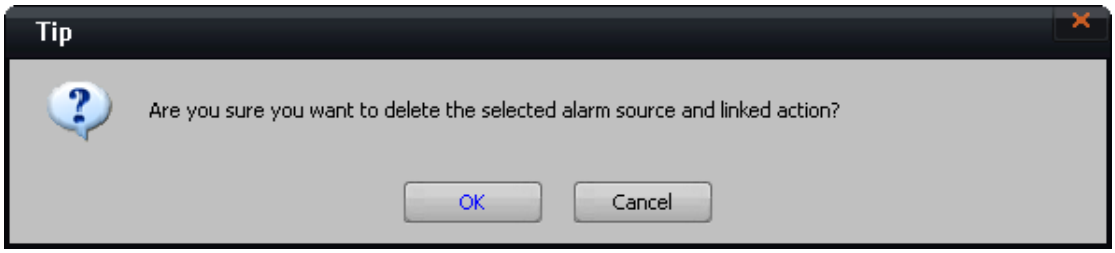


Figure 6-39 Delete Alarm Linkage

6.7 Peripheral

Click [Peripheral] and enter peripheral configuration interface (Figure 6-40), and configure peripheral devices like serial port, alarm box, etc.

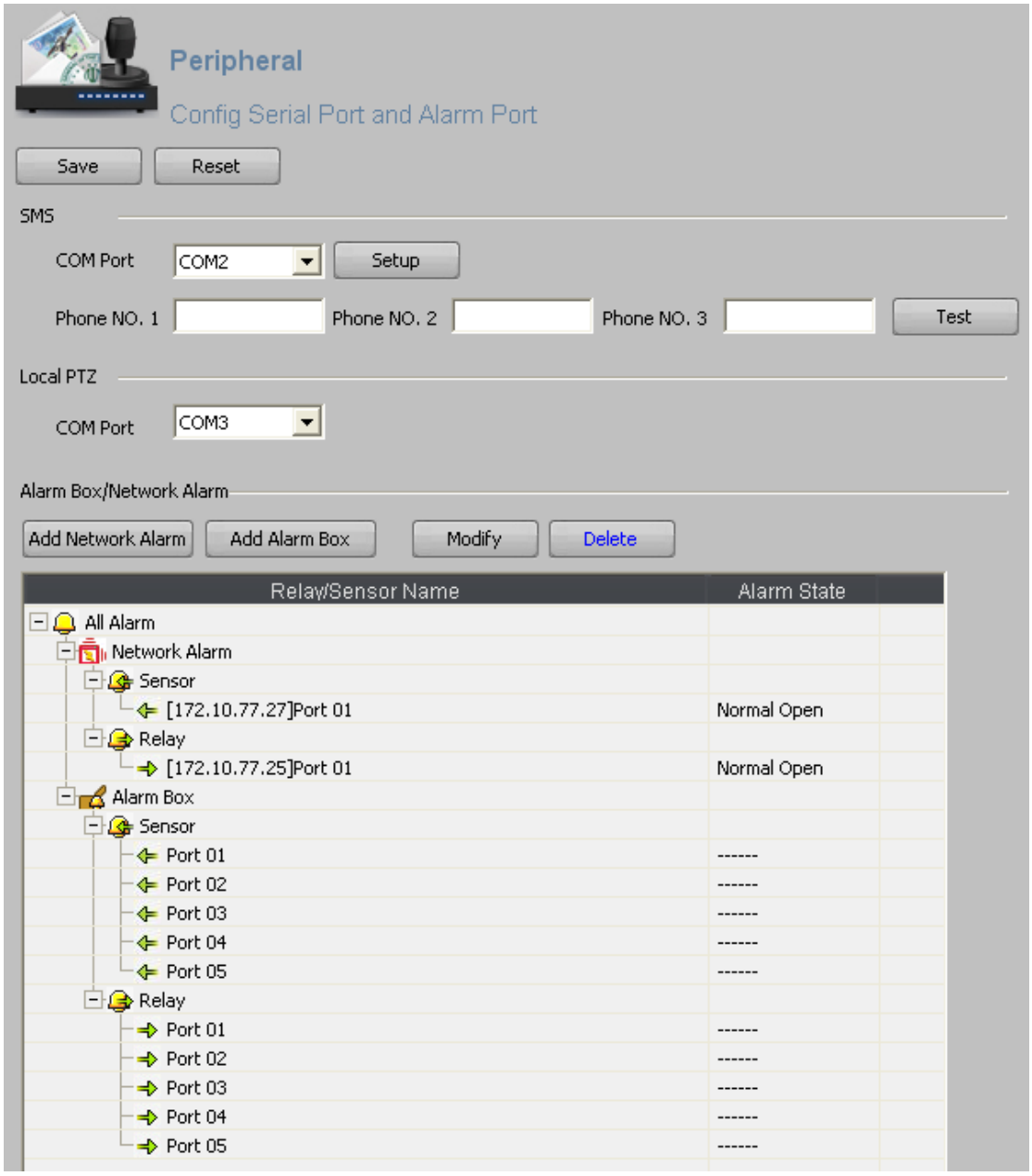


Figure 6-40 Peripherals Configuration Interface

6.7.1 SMS Configuration

Users can configure COM port and mobile phone number to receive the short message in the SMS configuration interface, and the SMS configuration is related to the SMS alarm linkage configuration.

A GSM/GPRS modem is required for SMS function (Please refer to the installation guide of GSM/GPRS Modem for its configuration steps). After the modem is connected and its driver is installed, users can read the COM port number for the modem in “Device Manage” of Windows OS. Please input the COM port info and mobile phone number in iVMS-2000 configuration interface, and click [OK] after testing.

Notes: The COM port for SMS cannot be duplicated with COM port for PTZ or alarm box.

6.7.2 PTZ COM Port Configuration

Users need to configure the PTZ connection port for iVMS-2000, and click [Save]. For the other PTZ configurations, such as PTZ protocol, address and COM port data information can be configured under Camera configuration.

Notes: The COM port for PTZ cannot be duplicated with COM port for SMS or alarm box.

6.7.3 Alarm Box Configuration

Add/ Modify/ Delete local or network alarm box.

[Add Alarm Box]

Add local sensor input and replay output (Figure 6-41) and configure COM port information, such as sensor input port and relay output port. Users can test the I/O signals while adding alarm box information. For [Check Sensor] function, users need to connect sensor input devices on the alarm box; and for [Check Relay], users need to click each icon under this button to test the relay output for the alarm box.

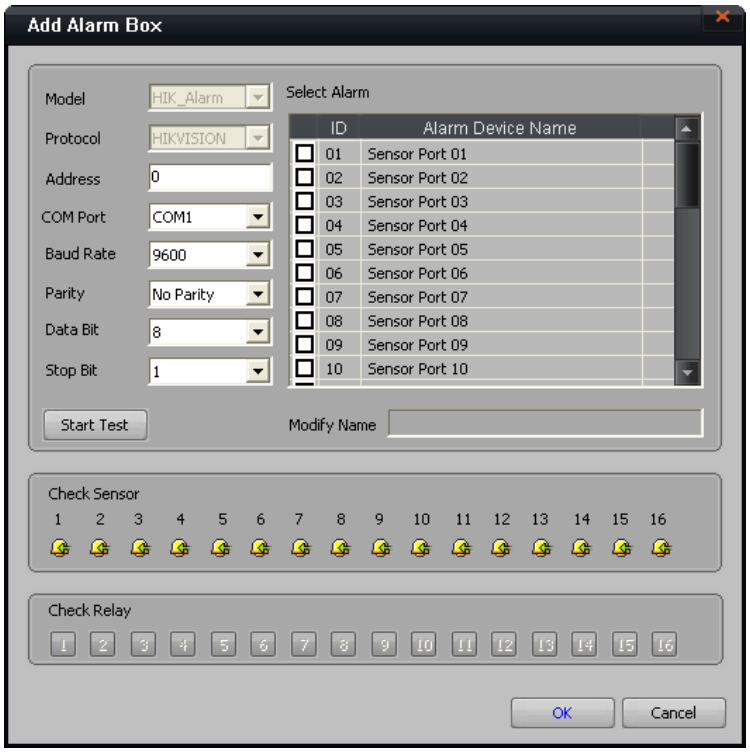


Figure 6-41 Add Alarm Box

Notes: The COM port for alarm box cannot be duplicated with COM port for SMS or PTZ.

[Add Network Alarm]

Add sensor input and relay output for IP Cameras (Figure 6-42). Select the sensor or relay and click [OK] to add. Users can also test sensor or relay as when adding alarm box.

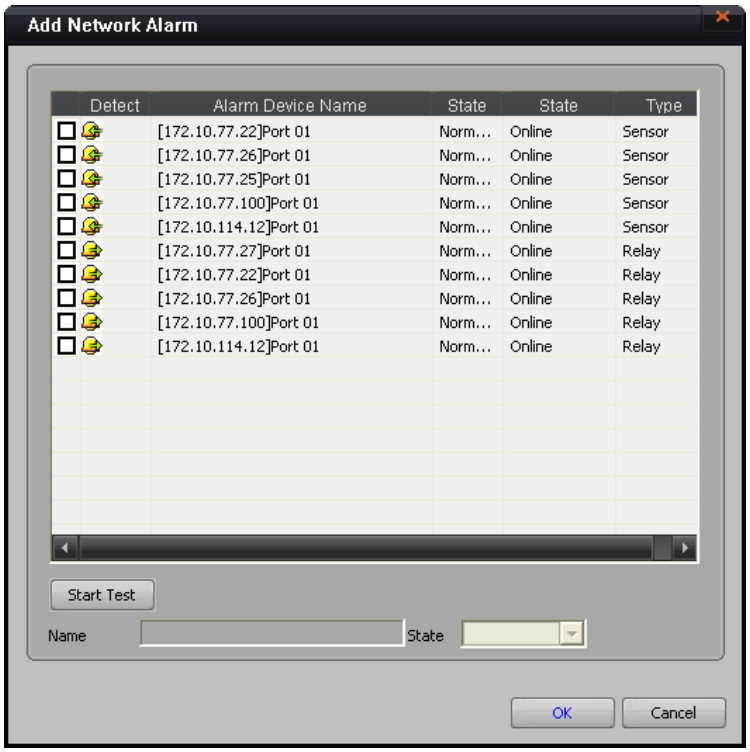


Figure 6-42 Add Network Alarm

[Modify]

Select any of the network sensor and then modify all the network sensor configuration, or select any of the network relay and then modify all the network relay configuration, or select any of the alarm box and then modify all the alarm box configuration.

[Delete]

Select the sensor(s), relay(s) or alarm box(es) and click [Delete] to delete the alarm settings.

Notes: Users need to click [Save] to save the modified alarm configuration before taking effect.

6.8 User Configuration

Click [User] and enter user configuration interface (Figure 6-43), and add, delete or modify user account and privileges.

Figure 6-43 User Configuration Interface

There is a default administrator account for the system: **admin**, with its password: **12345**. Only this user has complete privilege and is able to add, delete or modify other user accounts, while all the other users can only modify their own passwords.

[Add]

Click [Add] and add operator account after login the system with admin account (Figure 6-44). Input user name, password, confirm password and add the operator. Admin can also disable/enable the operator account, or restrict its login IP or MAC for remote client software connection.

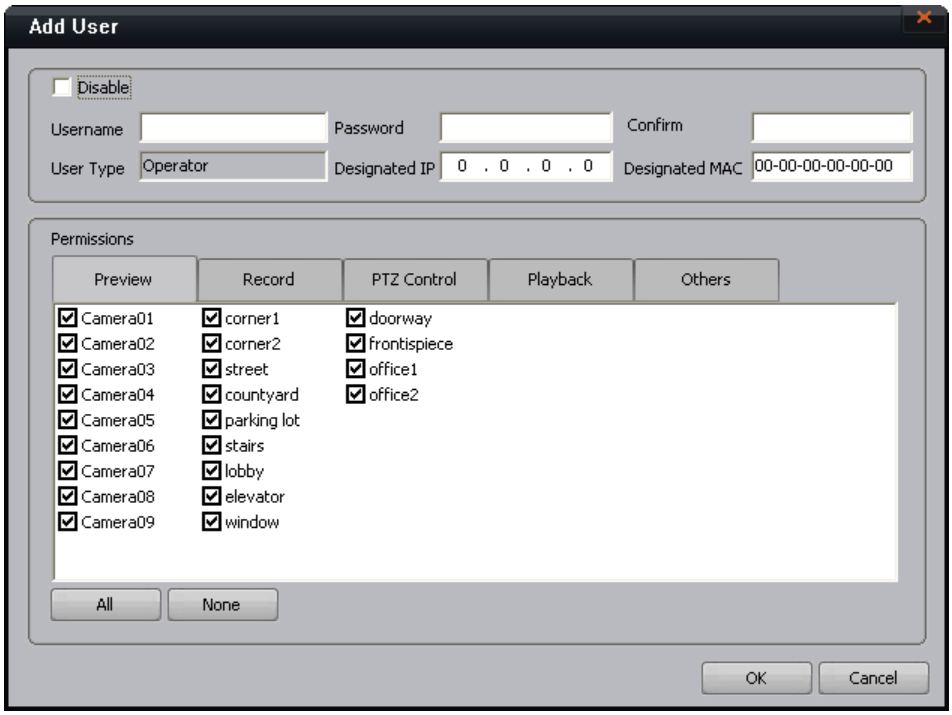


Figure 6-44 Add Users

Notes: Only admin can add new user accounts, and all these accounts are with operator privileges.

[Modify]

Admin can only modify its password, but cannot modify the user name. Admin can also modify other user accounts while all the other users can only modify their own passwords.

Notes: Users can modify the password directly via "Modify Password" under system menu.

[Delete]

Select an operator account on the user list and click [Delete], and then click [OK] in the prompt dialog box to delete this user (Figure 6-45)

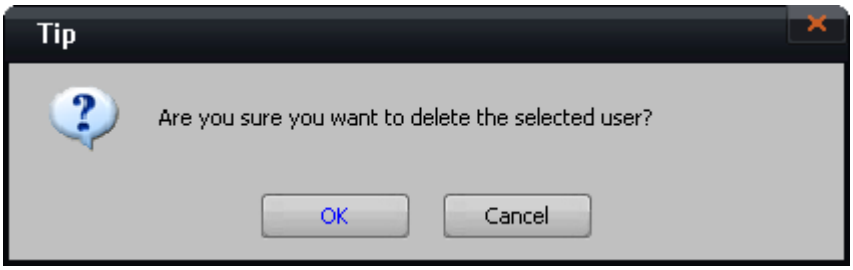


Figure 6-45 Delete User

Notes: Only admin has the privilege to delete the operator accounts, and the admin account cannot be deleted.

6.9 Others

Click [Others] to enter other configuration interface (Figure 6-46). This configuration interface is mainly used for email and alarm audio settings, etc. Users can click the Tabs above to switch between different setting pages.

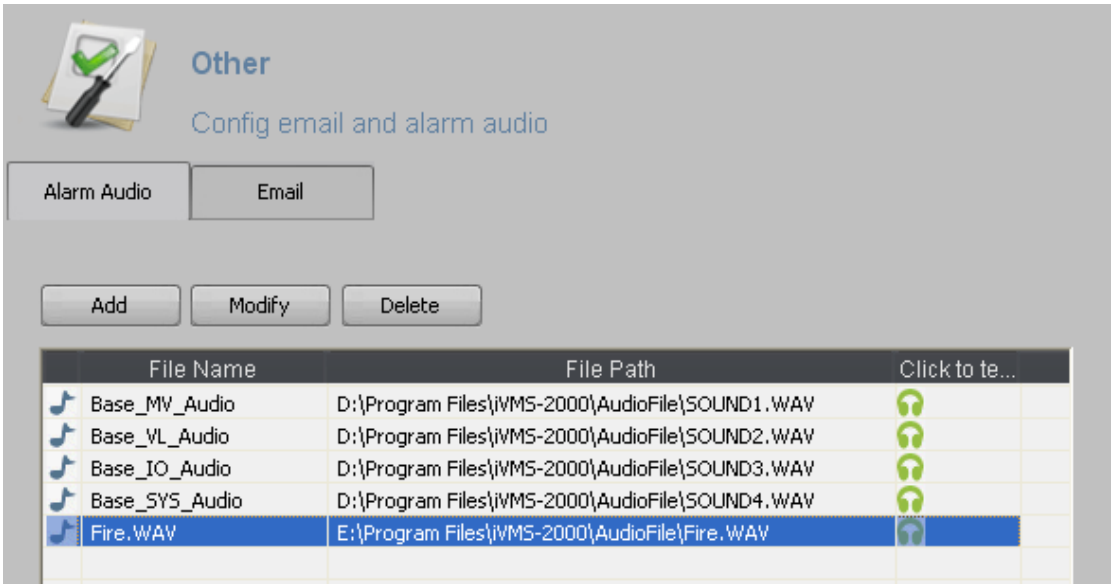


Figure 6-46 Other Configuration Interface

[Alarm Audio]

Audio files for alarm linkage configuration. There is 4 default alarm audio files in the iVMS-2000 system, and the users can add no more than 12 audio files (Figure 6-47).

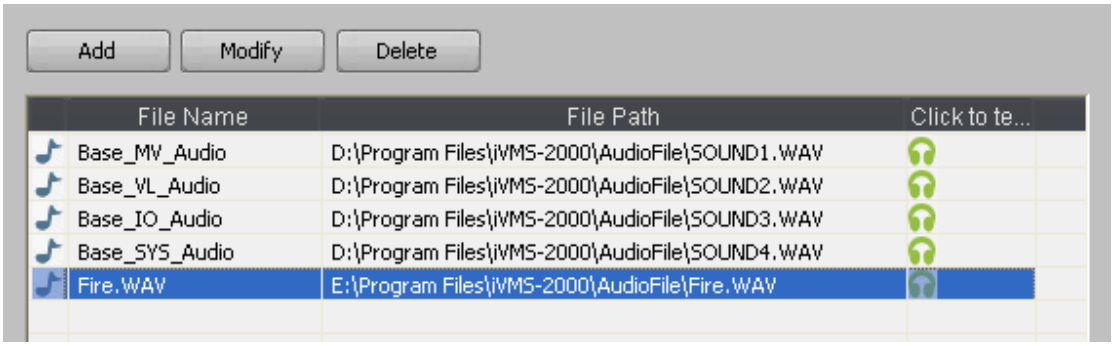


Figure 6-47 Alarm Audio Configuration

[Add]

Add alarm audio file. Click [Add] and select audio files and set its name in the prompt dialog box (Figure 6-48), and then click [OK].

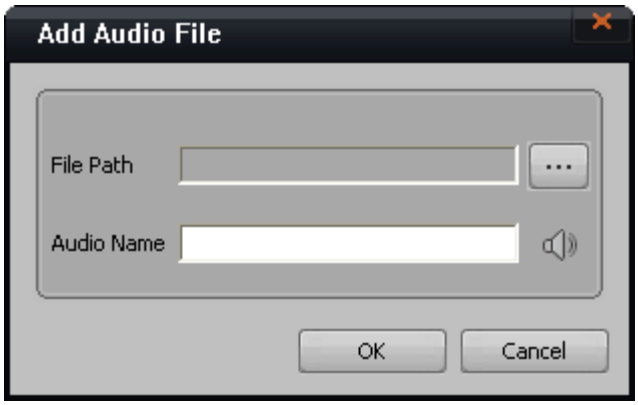


Figure 6-48 Add Audio File

[Modify]

Modify the audio file and name (Figure 6-49).

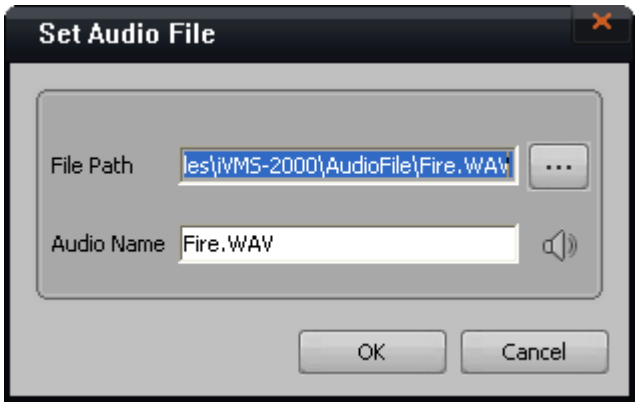


Figure 6-49 Modify Audio File

[Delete]

Select an audio file in the audio file list (the 4 default files cannot be deleted), click [Delete] and then click [OK] on the prompt dialog box (Figure 6-50).

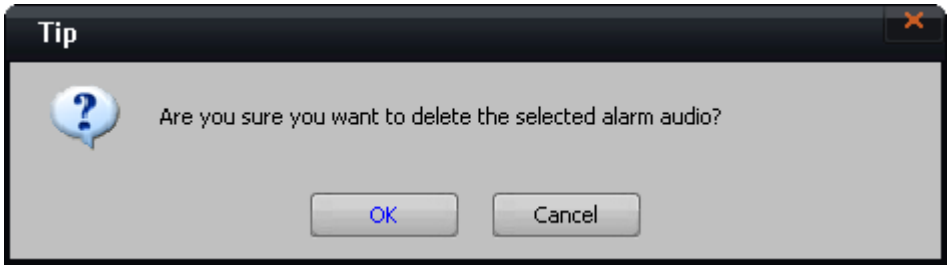


Figure 6-50 Delete Audio File

Notes: the 4 default files cannot be deleted.

[Email]

ConFigure send/ receive address and content, etc for alarm linked email configuration (Figure 6-51).

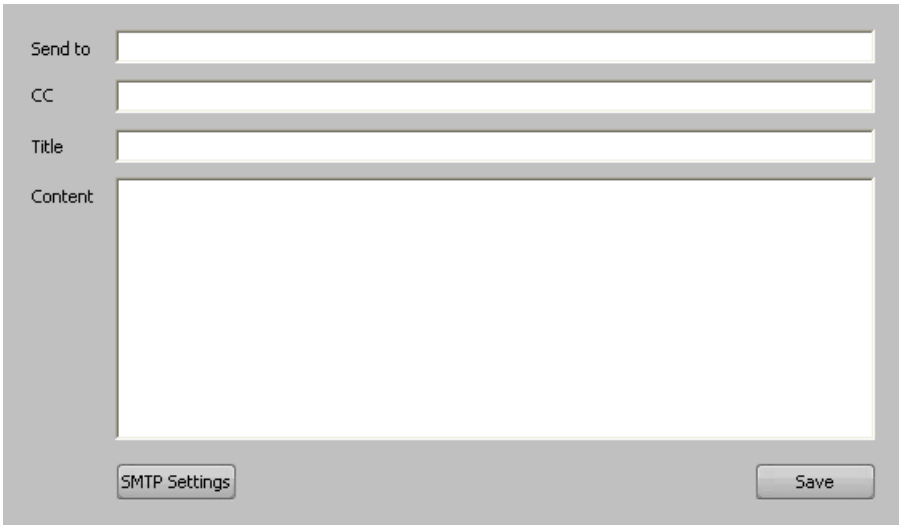


Figure 6-51 Email Configuration

Users need an mail account which supports SMTP to send the email. Click [SMTP Settings] and set the Email account for the sender (Figure 6-52).

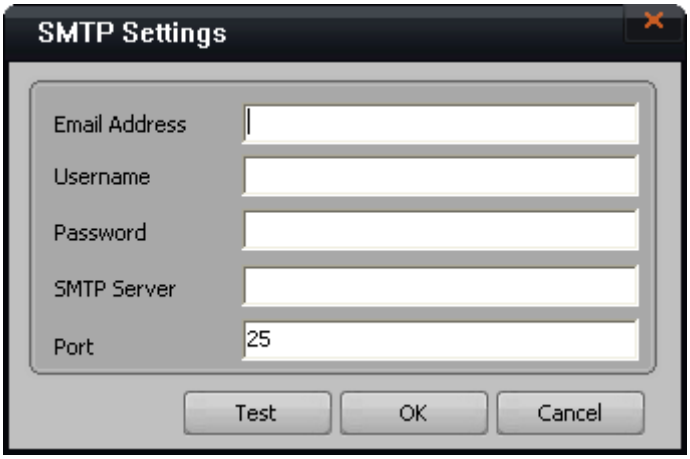


Figure 6-52 SMTP Settings

After SMTP settings are properly configured, users can click [Test] and test if this account can send the emails correctly. The SMTP account will send a test email to its own address then, and if the users receive the test email properly, please follow the operation steps below.

ConFigure receiver address, CC, subject, content, and click [Save]. For multiple receiving address, please separate each of them with ";".

Notes: The alarm audio and email configuration can also be visited in alarm linkage configuration interface.

7 Appendix

7.1 Technical Terms

CIF

Common intermediate format, a format of color images, 352*288 pixels (for PAL system)

QCIF

Quarter Common Intermediate Format, a format of color images, 176*144 pixels (for PAL system)

DCIF

Short form of DOUBLE CIF, a format of color images, 528*384 pixels (for PAL system)

2CIF

2-times Common Intermediate Format, a format of color images, 704*288 pixels (for PAL system)

4CIF

Four-times Common Intermediate Format, a format of color images, 704 x 576 pixels (for PAL system)

OSD

On Screen Display

CBR

Constant Bit Rate

VBR

Variable Bit Rate

PTZ

Pan, Tilt & Zoom

USB

Universal Serial Bus

H.264

A new digital video encode standard promoted by the joint video team (JVT) which is formed by the VCEG (Video Coding Experts Group) under ITU-T and MPEG (Moving Picture Experts Group) under the International Organization for Standardization (ISO).

FAT32

FAT32 (File Allocation Table) is a kind of file allocation table with cluster counts held in a 4-byte (32-bit) field. For the FAT32 subarea format, each cluster is fixed at 4 KB, and therefore greatly reduces the waste of disk space and improves the utilization of the disk.

NTFS

NTFS is the standard file system of Windows NT and Windows NT Advanced Server network operating system.

NTFS is going to provide reliability via the recoverable capacity (event tracing) and the hot-located fault-tolerant characteristics; a platform to increase functionality; demand for POSIX support; and also elimination of FAT and HPFS file system limitations.

NTSC

NTSC (National Television Standards Committee) is a color TV broadcast standard with 30 fps frame rate, and is widely used in North-America, Japan, and South-American countries.

PAL

PAL (Phase Alternation by Line) is is a color TV broadcast standard with 25 fps frame rate, and is widely used in UK, East and Middle Asia, Europe and African countries which adopts 50Hz AC power supply.

.WAV

Short for Waveform audio format, a kind of Digital Audio File Formats

Patrol

PTZ moving track

Preset

Preset PTZ position

PTZ

A mechanism device to pan, tilt or zoom the cameras,

Baud Rate

Baud rate is the number of bits transmitted per second, i.e. 300 bit/s stands for 300 bits are sent per second; and if the PTZ protocol needs 4800 as baud rate, then it represents the clock cycle is 4800Hz, and the serial port communication sampling rate is also 48000HZ. Usually the baud rate for telephone wire is 14400, 28800 and 36600, the baud rate can be set as much higher than these values, but the baud rate is inversely proportional to the maximum transmission distance. High bit rate is usually used for short distance communication, i.e. GPIB device communication.

Data Bit

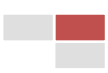
Data bit is a measure of the actual data bits in communication. When the computer sends a packet, the actual data bits is not 8 digits, and the standard value is 5, 7 or 8, depending on how you want to configure the transmission of information. For instance, the standard ASCII code is 0 to 127 (7 digits), and the extended ASCII code is 0 to 255 (8 digits). If the data using a simple text (standard ASCII code), then each data packet uses 7 digits information. Each package stands for 1 byte, including start / stop bit, data bit and parity bit. As the actual data digits depend on the communication protocol, the term "package" is for any communications.

Stop Bit

Stop bit is used to mark the last digits of the package, whose typical value is 1, 1.5 or 2. AS data transmission is schedule on transmission lines, and each device has its own clock, it is likely that communication between the two devices will not in complete synchronization. Thus the stop bit does not only stand for end of the transmission, but also provides system clock synchronization checking. The larger the stop digits, the more endurance of different clock synchronization, yet slower the data transmission.

Parity Bit

There is a simple error detection way for serial communication which includes 4 detection mode: even, odd, high and low. (Of course, no parity bit is also allowed.) On even and odd checking, the serial port will set up a parity bit right, with a value of the data to keep transmission digits in even or odd number. For example, if data is 011, then the parity bit is 0 to guarantee logic high median is even number. When in odd check, then the parity bit is 1 so that there are three logical high digits. The high and low bit do not actually check the data information, but only through a simple logic check. This makes receiving devices to know if there is a noise interferes in communication or whether transmission and reception of data is



not synchronized by digit status.

Hot Spot

Spot on the E-map which is linked with other E-map

Sensor (for E-map)

Spot on the E-map which is linked with alarm sensor input

Saturation

The intensity of a specific hue of color video

Brightness

Brightness is an attribute of visual perception in which a source appears to be radiating or reflecting light.

Hue

The degree to which a stimulus can be described as similar to or different from stimuli that are described as red, green, blue, and yellow.

Contrast

The dissimilarity or difference between color brightness

Alarm Box

Device to pick up sensor input and relay output signals

Local Display

Video output directly from the encoding device

Trigger Replay

Output alarm signals under certain interval

Serial Port

Serial port interface

Port

Port address for the protocol, an integer to represent a process

MAC

Media Access Control

Motion Detect

The whole monitoring image is divided into various small areas, among which users can select any areas with different sensitivity level, and the movements in these areas will be detected by the camera and trigger motion record.

Video Tamper Alarm

Alarm when video being tampered

Privacy Mask

Mask certain area of the image.

Pre-record Time

Save recording in a short duration before the scheduled start time

Post-record Time

Save recording in a short duration after the scheduled start time

Bit Rate

Bit rate is the bit number per unit time in data transmission, usually using the unit of kbps (kbit per second), or to say, the sampling rate. The highest the sampling rate per unit time, the more precise the data information, and the more close the transmitted file to the original file. But the file size will increase as the sampling rate increases, thus almost all the encoding standard is focus on acquiring least

distortion with smallest video size, and the CBR (Constant Bit Rate) and VBR (Variable Bit Rate) is originated from it. On the side of audio encoding, the higher the bit rate, the less the compression ratio and sound distortion, but the encoding algorithm is different for different audio players, and the bit rate is not the only measure for audio quality. For instance, it is not exactly that the sound quality of lower bit rate mp3 files is not as good as higher bit rate wma file, especially after using VBR encoding. In some occasions, VBR can even achieve better audio quality than CBR on the same encoder.

Stream Type

Compressed stream type containing both video stream and video & audio stream.

Video & Audio Stream

Multimedia stream that contains both video and audio information

Video Stream

Pure video stream

Video Frame Rate

Video frames per second

Frame Rate

FPS, stands for frames per second, the value of information data flow of dynamic images. Continuous playing of static images will enable the feeling of dynamic video, and the movements will be much fluent as fps value raises.

Frame Type

I frame (Intra code frame) is intra-frame encoding frame, P(Predicted frame)is forward forecast coding frame according to I or the previous P frame, B(Bi-direction frame)is interpolation frame calculated by neighboring I, P or P, P frames.

Dual Stream

It means a camera of video images passing through the video coder, and output 2 independent bit streams. The resolution, frame rate, bit rate and other parameters of output bit stream can be set independently. The output dual steam can meet different demands, for example, one for hard disk storage and the other for network transmission.

Watermark

It means to insert hidden information, i.e. digits, serial number, characters, logo, etc into digitalized multimedia files by signal processing technology. Such marks are usually invisible, and can only be extracted by specially designed detectors to get the purpose of copyright protection.

TV Wall

TV wall is formed by integration of multiple display units. A large-screen TV wall system is consisted of TV wall units, TV wall processor and TV wall interfaces. Generally speaking, any display unit can be adopted to TV wall system. TV wall processor can do image processing (divide and enlarge) to a complete standard video input signal and output to M*N standard display devices, and the TV wall interfaces is device for signal transforming and output between signal input and TV wall output.

Resolution

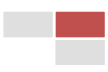
Resolution types include display resolution, image resolution and pixel resolution.

Display resolution is the largest area shown on the screen in particular display mode, in representation of horizontal and vertical pixels.

Image resolution refers to the size of digital image, also represented by horizontal and vertical pixels.

If the image resolution is bigger than display resolution, then some images can't be displayed.

Pixel resolution refers to a ratio of pixel's width and length. Different ratio will cause the deformation



of images.

Common Image resolution modes in digital surveillance are:

PAL: QCIF (174*144), CIF (352*288), 2CIF (704*288), DCIF (528*384), FULL D1 (704*576) , VGA (640*480) , SVGA (800*600) , UXGA (1600*1200) , HD720P (1280*720) .

NTSC: QCIF (174*120), CIF (352*240), 2CIF (704*240), DCIF (528*320), FULL D1 (704*480), VGA (640*480), SVGA (800*600), UXGA (1600*1200), HD720P (1280*720).

Common VGA resolution: 640*480, 800*600, 1024*768,1280*1024, etc.

Dynamically Adjust Encoding Parameters

The dynamically adjusted encoding parameters can take effect at once without pausing or restarting network transmitting and recording.

In surveillance system, for static monitoring scene, video can be recorded in low bit rate through reducing resolution, image quality, bit rate and frame rate, while changing of images require higher resolution , bit rate and frame rate of video, etc to get high quality video stream. Since the above parameters can be dynamically modified, continuous images can be maintained without switching files frequently. And it does not only meet the requirement of high-quality images at critical moments, but also save the disk space and network bandwidth.

File System Fragment

When a file is recorded and scattered in discontinuous clusters, the content in the discontinuous clusters is called file system fragments. When contents of the files in the hard disk were frequently deleted and re-written, the file system fragments will appear easily, and thus increase the seeking delay and rotation delay of the hard disk, and then affect its efficiency and life-span.

If the file is defined beforehand and pre-allocated to consecutive clusters, the generating of file system fragments can be completely avoided.